AN OPEN COMPARATIVE CLINICAL EVALUATION ON "THADIPPU PERUNOI" (PSORIASIS) WITH SIDDHA TRIAL DRUGS "SWARNA PUSHPA RASA CHENDURAM" (INTERNAL), "VETTIVER THAILAM" (EXTERNAL) AND "PRANAYAMAM".

The dissertation Submitted by

Dr. A. ANITHA, B.S.M.S,

Registration No. 321413101

Under the Guidance of

Dr. M.MOHAMED MUSTHAFA, M.D (S)

Dissertation submitted to

THE TAMILNADU DR. MGR MEDICAL UNIVERSITY

CHENNAI-600032

For the partial fulfillment of the

Requirement to the Degree of

DOCTOR OF MEDICINE (SIDDHA)

BRANCH-III-SIRAPPU MARUTHUVAM

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM

THE GOVERNMENT SIDDHA MEDICAL COLLEGE

CHENNAI -106

OCTOBER 2017

GOVT. SIDDHA MEDICAL COLLEGE, CHENNAI - 600106

DECLARATION BY THE CANDIDATE

I hereby declare that this dissertation entitled **An Open Comparative Clinical Evaluation On "Thadippu Perunoi" (Psoriasis) With Siddha Trial Drugs "Swarna Pushpa Rasa Chendhuram" (Int), "Vettiver Thailam (Ext)'' And "Pranayamam"** is a bonafide and genuine research work carried out by me under the guidance of **Dr. M. MOHAMED MUSTHAFA, M.D (S),** Post Graduate Department of **Sirappu Maruthuvam**, Govt. Siddha Medical College, Arumbakkam, Chennai-600106 and the dissertation has not formed the basis for the award of any Degree, Diploma, Fellowship or other similar title.

Date: **Signature of the Candidate**

Place: Chennai **A. ANITHA**

GOVT. SIDDHA MEDICAL COLLEGE, CHENNAI - 600106

CERTIFICATE BY THE GUIDE

This is to certify that the dissertation entitled **An Open Comparative Clinical Evaluation On "Thadippu Perunoi" (Psoriasis) With Siddha Trial Drugs "Swarna Pushpa Rasa Chendhuram" (Int), "Vettiver Thailam'' (Ext) And "Pranayamam"** is submitted to the Tamilnadu Dr. M. G. R. Medical University in partial fulfillment of the requirements for the award of degree of M.D (Siddha) is the bonafide and genuine research work done by **A.ANITHA** under my supervision and guidance. The dissertation has not formed the basis for the award of any Degree, Diploma, and Associate ship, Fellowship or other similar title.

Date: **Seal & Signature of the Guide**

Place: Chennai **Dr. M. MOHAMED MUSTHAFA, M. D (S),**

ENDORSEMENT BY THE HOD, PRINCIPAL/HEAD OF THE INSTITUTION

This is to certify that the dissertation entitled **An Open Comparative Clinical Evaluation On "Thadippu Perunoi" (Psoriasis) With Siddha Trial Drugs "Swarna Pushpa Rasa Chendhuram" (Int), "Vettiver Thailam" (Ext) And "Pranayamam"** is a bonafide work carried out by **A. ANITHA** during the year 2013-2016 under the guidance of **Dr. M. MOHAMED MUSTHAFA, M.D (S),** Post Graduate Department of Sirappu Maruthuvam, Govt. Siddha Medical College, Chennai - 600106.

Seal & Signature of the HOD **Seal &Signature of the Principal**

Date: **Date:**

Place: Chennai **Place:** Chennai

ACKNOWLEDGEMENT

First of all I am grateful to Almighty God who in every moment of life always with me and blessed me.

No words make articulate to acknowledge didactic guidance rendered by my guide **Dr. M. MOHAMED MUSTHAFA M.D(s)**, Reader, Government siddha medical college, Chennai. I sincerely express my boundless reverence for his excellent guidance, constant encouragement, timely advice and thoughtful criticism.

It is a time for me to express my gratitude to the **Vice - chancellor**.The Tamilnadu Dr.M.G.R Medical University, Guindy, Chennai and to the **Commissioner** of Indian Medicine and Homeopathy Department, Arumbakkam, Chennai-106 for the giving permission to do the dissertation.

I convey my thanks to **prof, Dr. K. KANAGAVALLI M.D(S),** Principal, Govt Siddha Medical College, Arumbakkam for providing all favour facilities in the college.

It is my gratitude to **Dr.G.SEKAR M.D(S),** post graduate Dept of Sirappu Maruthuvam, for his support in this study.

I would like to show my gratitude to **Dr.T.R.SIDDIQUE ALI M.D(S),** post graduate Dept of Sirappu Maruthuvam for his support in this study.

I would like to convey my gratitude to **Prof.Dr.V.VELPANDIAN, M.D(S), PhD.** PG Dept of Gunapadam, with his inspiration and great efforts to explain the Pharmacological activity for my study.

It is my privilege to express intense gratitude to the **Prof. SELVARAJ**, Head of the department, Dept of Bio chemistry, Govt siddha medical college, Arumbakkam, Chennai-600106.

It is my gratitude to the **Prof. SURESH KUMAR**,**Ph.D,** Head of the department, Dept of Microbiology, Govt siddha medical college, Arumbakkam, Chennai-600106.giving me valuable knowledge about my in-vitro study.

It is my gratitude to the **Mr.S. SANKARANARAYANAN, Ph.D**, Head of the department, Dept of Medicinal Botany, Govt siddha medical college, Arumbakkam, Chennai-600106.giving me valuable knowledge about my in-vitro study.

My sincere thanks to **Dr. P. SATHYA RAJESWARAN, M.D(S)**, Scientist II, Central Research Institute, Chennai, His skills and advices were of great value for completing my work.

My sincere thanks to **Chairman and Members of Institutional Ethical Committee (IEC)** members, Government siddha medical college, Chennai. for their approval.

I am very much grateful to **Mrs. SHAKILA Msc, PhD**, Research officer SCRI, Chennai-106, for their guidance and support in physico- chemical analysis and authentication of metals and minerals.

I express my sincere thanks to **Dr. P. MURALI DHARAN**, Pharmacologist, C. L. Baid Mehta College of pharmacology, Thoraipakkam for his assistance in the toxicity studies.

My sincere thanks to **prof.RAJESH** Biogenix research institute, Trivandrum, for his assistance in my pharmacological studies.

I wish to thank **DR. B. JANARTHANAM**, Poonga Biotech Research Centre, Chennai for helping me to finish my heavy metal analysis.

It is a pleasure to thank for all the **LABORATORY STAFFS** of Govt siddha medical college and Arignar Anna Govt hospital for Indian Medicine & homeopathy, Arumbakkam, Chennai-106.

I wish to thank **Dr. MANIVASAGAM, B.S.M.S,** M.sc Epidemiology for helping to do Biostatistical analysis.

I am also my thankful to our librarian **Mr.V.DHANDAYUTHAPANI**, **Mcom, M.lis**, Librarian, Dr. Ambedkar library GSMC, Chennai-106, for his help, in literature collection.

I am very thankful to my **PATIENTS** for their kind co-operation who had participated in this trial.

My special thanks to my seniors and also my good Sisters **Dr.S.RAJALAKSHMI,MD(S**), **Dr.A.LAVANYA,MD(S**),for her suggestions and valuable knowledge throughout my dissertation work, no word to express my thanks.

I am thankful to **COLLEAGUES AND JUNIORS** also my **CLASSMATES** of SirappuMaruthuvam department, Chennai for their support to complete my dissertation work.

CONTENTS

1. INTRODUCTION

Siddha system of medicine is one of the ancient and holistic medical system in the world. Siddha system deals with physical as well as mental health. Siddhars were spiritual scientists who possessed the "Ashtama Siddhis" (eight supernatural powers). With their siddhis, they find out the ways to attain peaceful, healthy, long life and even eternity.

In olden days, there were 18 siddhars who developed siddha medicine as a systematic medical system. Siddha medicines are prepared using herbs, metals, minerals and animal products as raw drug.

Siddha medical system uses chemico-metallurgical raw drugs of 212 varieties namely mercury, sulphur, arsenic, minerals etc. The drugs undergo many process like incineration or sublimation and again triturated. The final product which are higher order form of medicine like chenduram, parpam, etc. It has physical-chemical transformation, reduction in particle size, long duration of shelf life, efficacy enhancement, reduced toxicity level.

"SWARNA PUSHPA RASA CHENDHURAM" is one of the Chendhuram selected here as trial drug for the study in psoriasis.

Psoriasis is common, non-contagious and chornic skin disease characterized by well demarcated slightly raised, dry erythematous macules with slivery scales and typical extensor distribution. Most often on the elbows, knees, scalp, hands and feet. It is pandemic in temperate climate. Onset between 20-30 yrs. of this1,50,000-2,60,000 new cases of psoriasis are diagnosed each year. About 400 people die from complications caused by psoriasis every year. About 11% patients have psoriatic arthritis.

Among all the diseases affecting human beings, skin diseases are the most challenging. As skin plays a major role in the appearance of an individual skin diseases affect a person not only physically but also mentally. So treatment should be given for both physical and mental strength. Many skin disease are classified by siddhars brought

under “KUTTAM”. There are 18 types of kuttam in “YUGIMUNI” from these types (Thethuru kuttam) “Thadippu Perunoi” resembles the skin disease “PSORIASIS”.

The dry erythematous macules of skin in psoriasis can be itchy and uncomfortable. Topical application with oil based may give greasy and moisture effect. Herbs in “VETTIVER THYLAM” removes dead skin and allows the medication to work better.

Stress is a common trigger for a psoriasis flare. Psoriasis flare can cause stress. So stress management should be part of any treatment plan. Pranayamam is the science of breathing. Pranayamam brings back to parasympathetic nervous system which is responsible for relaxation and restorative processes. Pranayamam lowers the level of cortisol, increases the level of melatonin and serotonin. Pranayamam may have treating ability of psoriasis by reducing stress. So “PRANAYAMAM” is included in this study to create a complete treatment plan for psoriasis.

The concern of this study is to get subjective as well as clinical improvement by pharmacotherapy with “SWARNA PUSHPA RASA CHENDHURAM” (INTERNAL), “VETTIVER THYLAM” (EXTERNAL) and breathing therapy with “PRANAYAMAM” in the management of psoriasis**.**

2. AIM AND OBJECTIVES

AIM:

To evaluate the safety and efficacy of Herbo metallic Siddha Drugs "Swarna Pushpa Rasa Chendhuram" (Internal), "Vettiver Thylam" (External) & "Pranayamam" in management of Thadippu Perunoi (Psoriasis).

PRIMARY OBJECTIVES:

To evaluate the efficacy of the Siddha Trial Drugs "Swarna Pushpa Rasa Chendhuram" (Internal), "Vettiver Thylam" (External) & "Pranayamam" in Thadippu Perunoi (Psoriasis).

SECONDARY OBJECTIVES:

- To study the safety profile of trial drug Swarna Pushpa Rasa Chendhuram (Internal).
- To discuss the various literature evidences of Thadippu Perunoi in Siddha Medicine and Psoriasis in modern science.
- To Study the Siddha purification method of raw drugs.
- To get the authentication of the raw drugs.
- To standardize the standard operating procedure.
- To Study the physico- chemical analysis of the selected trial drug.
- To study the acute & sub - acute toxicity of the trial drug Swarna Pushpa Rasa Chendhuram according to OECD guidelines.
- To analyze the pharmacological activities of the selected trial drug.
- To estimate the quantity of heavy metals analysis in the trial drug.
- To evaluate the safety of the trial drug Swarna Pushpa Rasa Chendhuram in Psoriasis patients before and after treatment.

3. REVIEW OF LITERATURES

3.1. SIDDHA ASPECT OF DISEASE(THADIPPU PERUNOI)

The skin diseases are classified as 18 in Siddha System of Medicine. Thesediseases are commonly classified under Kuttam. They are otherwise known as Perunoi. So the term is used for various skin disease like Psoriasis, Vitiligo, Eczema, Hansen's disease , etc[1].

இயல்[1]:

குட்ட நோயில் உடல் மினுமினுத்தல் படைகளுண்டாதல், கழலைகள் காணுதல், கை கால்களின் விரல்கள் அழுகுதல் அல்லது அவைகள் வளைந்து குறைதல் ஆகிய இயல்புடையதாகும்.

குற்றங்கள் முதன் முதலில் குருதியையும், இரண்டாவதாக சதையையும் தாக்கி பின்னர் தோலின் வழியாக வெளிப்படும் இயல்புடைய நோய் ஆகும்.

AETIOLOGY:

In the Siddha literature **"Thirumular Vaithiyam"** Said in

"வியாதியுண் மூவாறு விளங்கிய **குட்டங்கேள்**
சுயாதிக் கிரந்தி சுழன் மேகத்தாலாறும்
பயாதி மண்ணுளப் பலவண்டினா லெட்டும்
நியாதிப் புழுநாலாய் நின்றதிக் **குட்டமே**."

3 தொகுதிகளாக பிரிக்கப்பட்டுள்ளது.

அவையாவன

- கிரந்தி, மேகம் போன்ற பிணிகளினால் வருபவை - 6
- வண்டு போன்ற உயிரினங்களால் எற்படுபவை - 8
- புழு போன்ற நுண்கிருமிகளால் வருபவை - 4

In the Siddha literatures **"Guru Naadi Nool"** Said in

கிருமியால் வரும் நோய்கள்[3] :

"கிருமியால் வந்ததோடம் பெருக வுண்டு

கேட்கவதின் பிரிவதனைக் கிரம மாக

. . . . . .

தேகமதில் சோகைக்**குட்டங்** கிருமியாலே

துருமிவருஞ் சுரோணிதங் கிருமியாலே

சூட்சமுடன் கிரிசைப்பால் தொழில்செய் வீரே".

அவையாவன:

- பொருமல்
- வாய்வு
- புழுக்கடி
- பவுத்திரம்
- சோகை
- **குட்டம்**
- சுக்கிலப்பிரமேகம்.

கிருமியால் உண்டாகும் குட்டம் வரலாறு[3]

"**குட்டமது** விடகரப்பான் விடநீர் சூலை

சுரோணிதத்தால் தாதுகெட்டுத் தடிப்புண்டாகும்

மட்டறமே கிருமிசென்று மருவும் போது

வகையாய்க் கிருமியுட விடநீர் சென்று

குட்டமுடன் தேகமெல்லாம் பறக்கும் போது

குழிகுழியாய்க் கிருமியினீக் கொள்ளும் புள்ளி

தட்டறவே கிருமியுட நீரால்வந்த

சகலகுட்டம் விடகரப்பான் சாற்ற லாமே."

- குன்மம், கயநோய், சுரம், பாண்டு, மலடு, பெருவயிறு, விடகரப்பான், விடநீர் சூலை, சுக்கிலநட்டம் இவற்றால் தாதுக்கள் கெட்டுத் தடிப்புண்டாகும்.
- அதில் கிருமியுண்டாய், கிருமியுட விஷநீர் தேகமெல்லாம் பரவி, குழி குழியாய்ப் புள்ளிப்புள்ளியாய்க் கிருமியுட விடநீரால் குட்டம், விடகரப்பான் உற்பத்தியாகும்.

In the Siddha literatures **"THANVANTHIRI VAITHIYAM"** Said in

குட்டரோக நிதானம்[4]

"அறிவின்றி விபரிதஞ் சேராகாரம் புசிக்கலாலும்

துறையன்றி தொடாத தொன்றை தொட்டவைப் புசிக்கலாலும்

. . . . . .

வந்திந்துப் பூருவா சென் மாந்திர பாவத்தாலுஞ்

சந்திக்கக் கற்புமாதர் தங்களைக் கருதலாலும்

தொந்தித்த குட்டரோகந் தொடுக்குமென்றுரைத்தார் முன்னோர்."

- அறிவின்மையால் ஒன்றுக்கொன்று விரோதமான ஆகாரங்களை யொன்று சேர்த்துச் சாப்பிடுதல்.
- காரணமின்றி சாப்பிடக் கூடாதவைகளை சாப்பிடுதல்.
- பெரியார்களை நிந்தனை செய்தல்.
- சிநேகிதர்களைப் பிரித்தல்.
- கற்புள்ள மாதர்களை இச்சிப்பது.
- பூர்வ வினைகளால் குஷ்டம் பிறக்கும்.

In the Siddha literatures "**AGATHIYAR KANMA KANDAM**" Said in

குட்டம் வரலாறு[5]

"சேர்ந்தகுட்ட மோடுகுறை நோய்கள் வந்த

சேதிகள் மலராதவரும்பு கொய்தல்

தாரிந்த சீவசெந்து வதைகள் செய்தல்

தாய் தந்தை மனதுநொந்தது ரோகந்தானே".

- சீவசந்துகளை வதை செய்தல்
- தாய் தந்தை மனம் வருந்தச் செய்தல்

இவைகளினால் குட்டநோய் உண்டாகும் என கூறப்பட்டுள்ளது.

CLASSIFICATION OF KUTTAM:

According to YUGIMUNI Kuttam are 18 types[6]

These are

"முத்தாகும் குட்டந்தான் **பதினெட் டுக்கும்**

முனியான யூகியான் சொல்லக் கேளாய்

புத்தாகும் புண்டரீகக் குட்டத் தோடு

. . . . . .

துட்டமாஞ் சுவேதகுட்டந் தன்னோ டொக்கச்

சுயம்பான பதினெட்டுக் குட்ட மாச்சே".

அவையாவன:

1. புண்டரிகம்
2. விற்போடகம்
3. பாமம்
4. கஜசர்மம்
5. கரணம்
6. சிகுரம்
7. கிருஷ்ணம்
8. அவுதும்பரம்
9. மண்டலம்
10. அபரிசம்
11. விசர்ச்சிகம்

12. விபாதிகம்
13. கிடீபம்
14. சர்மதலம்
15. **தத்துரு**
16. சித்துமா
17. சதாரு
18. சுவேதம்

In the Siddha literature **"Siddhar Aruvai Maruthuvam"** Said in குற்றத்தின் அளவாக நோய் எண்[7]:

ஏழு

அவையாவன

1. வளிக் குட்டம்
2. அழற் குட்டம்
3. ஐயக் குட்டம்
4. வளிஐயக் குட்டம்
5. வளியழற் குட்டம்
6. அழல் ஐயக் குட்டம்
7. முக்குற்றக் குட்டம்.

1. வளியின் கீழ் : கபால குட்டம்
2. அழலின் கீழ் : அத்திக்காய்க் குட்டம்
3. ஐயத்தின் கீழ் : மண்டலக் குட்டம்
   சொறிக் குட்டம்
4. வளியழற் கீழ்: மரை நாக்குக் குட்டம்
5. வளியையத்தின் கீழ் : வெடிப்புக் குட்டம்

6. அழலையத்தின் கீழ் : திமிர்க் குட்டம்
   யானைத்தோல் குட்டம்
   பன்றித்தோல் குட்டம்
   புடைக் குட்டம்
   கூழாங்கற் குட்டம்
7. முக்குற்றத்தின் கீழ் : தடிப்புக் குட்டம்
   போரைக் குட்டம்
   படர்தாமரைக் குட்டம்
   எரிக்கொப்புளக் குட்டம்
   சிரங்குக் குட்டம்
   பிளப்புக் குட்டம்
   காகக் குட்டம்.

T. V. SAMBASIVAM PILLAI Authors classify this disease only under 8 varieties[8]
They are

1. Blisters in feet
2. Deformity of generative organs
3. Cutaneous fissures
4. Elephantiasis
5. Ulcers
6. Coppery blotches - lepra maculosa
7. Black leprosy – lepra graecorum
8. White leprosy – lepra mosaic

சாத்தியம் என கூறப்பட்டுள்ள குட்டங்கள்: யூகிமுனி கூற்றுப்படி : பத்து[6]
அவை

1. விற்போடகம்
2. பாமம்

3. **கசசருமம்**
4. **கிருட்டிணம்**
5. **அவுதும்பரம்**
6. **தத்துரு**
7. **சித்துமா**
8. **கிடிபம்**
9. **சதாரு**
10. **சருமம்**.

According to Yugimuni **Thethutru Kuttam (Psoriasis)** is curable.

அசாத்தியம் என கூறப்பட்டுள்ள குட்டங்கள்: எட்டு[6]

அவை

1. **புண்டரிகம்**
2. **கரணம்**
3. **சிகுரம்**
4. **மண்டலம்**
5. **அபரிசம்**
6. **விசர்ச்சிகம்**
7. **விபாதிகம்**
8. **சுவேதம்**

Psoriasis symptoms are co-related with features of Thadippu Perunoi (Thethuru Kuttam) in "YUGI VAITHIYA CHINTHAMANI"[9]

தேத்துரு குட்டம்

"சர்மந்தான் **சிவப்பாக வட்டதணிதுச்**

சலவைபோல் வெளுக்குமேதினவுண்டாகும்

கூர்மந்தான் ரோகமது மிகவுண்டாகும்

மயிரெல்லாஞ் சுருண்டுமே உண்டையாகும்

கர்மந்தான் பித்தசே டுமமி குக்கும்

காயந்தான் கதித்துமே திமிருண்டாகும்

தர்மந்தான் சடமெல்லா மூதலாகும்

தாக்கான தேத்திருக் குஷ்டந்தானே."

Explanations :

- தோலில் வட்ட வட்டமாகப் படைகளையுண்டாக்கும்-Coin shaped lesion
- சிறிது வெளுத்தாற்போலக் காணும்- White silvery scales.
- சிவந்து காணும்- Erythematous
- தினவை உண்டாக்கும்– Itching
- மயிர்கள் சுருண்டு திரட்சியாகும் - Curling of hair
- அழலையம் பெருகி உடலைக் கதிக்கச் செய்து திமிரை உண்டாக்கும்.
- உடலை ஊதச் செய்யும்

In **THETHURU KUTTAM(THADIPPU PERUNOI)** nowadays said in Siddha system of medicine was **KALANJAGAPADAI (Psoriasis)**

வேறுபெயர்கள்[10]:

- வெண்பரு செதில்நோய்
- செதில் உதிர் நோய்
- காளாயகஞ்ச வாதம்
- காளாஞ்சக வாதம்
- கிடீப குட்டம் (பன்றிதோல் பெருநோய்)
- கஜசரும குட்டம் (யானைதோல் பெருநோய்)

காளாஞ்சக வாதம்[6]

"வாதமாமங் கால் கையிற் குரங்கிரண்டும் வகுத்துசந்து
முறுக்கியே உடைந்துநொந்து
நாதமா நடைதானுந் தான் கொடாம
னலிந்துமே முடமாகிக் கரடுகட்டிச்
சேதமாஞ் சடந்தானு மிக வெளுத்துத்
தினவொடு சிரங்கு மாய்ச் சிலேட்டும மாகிக்
காதமா யருசியொடு மயக்கமாகங்
கருதியகா ளாஞ்சகமாம் வாத மாமே"

- வளி நோய் எண்பது வகைகளில் ஒன்றாகும்
- இந்நோயில் கை, கால், தொடை, மூட்டு இவைகளில் பிளப்பது போன்றும், முறுக்குவது போன்றும், குடைவது போன்றும், நொந்து நடக்க வொட்டாமற் செய்யும்– Pain present in all joints
- உடல் மெலிந்து, சந்துகள் தோறும் முடங்கி, கரடு கட்டிக் கொள்ளும் -Restricted movements.
- நடக்கவொட்டமாற்ச் செய்யும்- Difficulty in walking
- உடல் மிக வெளுக்கும்- Anemia
- தினவெடுக்கும்-Itching
- சொறி சிரங்குண்டாகும்- Pustules
- உடலில் ஐயங்ககூடி சுவையின்மை, மயக்கம் முதலியனவும் உண்டாக்கும்.

நோய் இயல்[1]:

- காளாகஞ்சகப்படை புறத்தோலையும், சளிச்சவ்வையும் பாதிக்கும் இயல்புடையது.
- புறக்காரணங்களாலும், அகக்காரணங்களாலும் மிகுந்தும் தனிந்தும் மாறி மாறி சுழற்சி முறையில் ஏற்படும் இயல்புடைய நோய்.
- மிகுவதும் குறைவதுமான இயல்புடைய இந்நோய் எறக்குறைய 12 வாரங்கள் தீவிர நிலைக்குட்பட்டுப் பின்னர் படிப்படியாகத் தன்னிலைக்கு வரும் இயல்புடைய நோய்.

நோய் பாதிப்பு[10]:

- மக்கள் தொகையில் சற்றேறக்குறைய 2 முதல் 3 சதவிதத்தினர் இந்நோயால் பாதிக்கப் பட்டிருக்கின்றனர்.
- இந்திய மக்கள் தொகையில் எறக்குறைய 1 முதல் 5 கோடி மக்கள் பாதிப்புக்குள்ளாவதாக மருத்துவச் செய்திகள் கூறுகின்றன.
- இன, சமுதாய, கலாச்சார வேறுபாடின்றி அனைத்து மக்களையும் பாதிக்கும் தன்மை உடையது.
- முன்னேறிய நாடுகளிலும் கூட இதே அளவுக்கு நோயின் தாக்கம் உள்ளதெனப் புள்ளி விவரங்கள் கூறுகின்றன
- 20 லிருந்து 40 வயதினர் பெரும்பாலும் முதலில் பாதிப்புக்கு உள்ளாகின்றனர்.
- பீடிப்புக்குப் பிறகு குணம் ஆவது குறைவு.
- குணம் கிடைத்தாலும் நீடிப்பதில்லை.
- திரும்பத் திரும்ப வரும்.
- 10 சதவிதத்தினருக்கு திரும்ப 5 ஆண்டுகள் வராமல் இருக்கிறது.

- ஆண்களை விட பெண்கள் அதிகமாக பாதிக்கப் படுகின்றார்கள்.
- பரம்பரை நோயாக மூவரில் ஒருவருக்கு வருக்கின்றது.
- கருப்பமுற்றிருக்கிற காலத்தில் குணமாவதும் குழந்தை பிறந்தபிறகு திரும்பவும் நோய்வருவதும் உண்டு.
- கால் வாசிப் பேருக்கு நகங்களைப் பாதிக்கின்றது.
- இப்பிணிக் கண்டவர்களில் 7 சதவிதத்தினருக்கு கீல்களைப் பற்றிய சந்துவாதசூலையும் உண்டாகின்றது.
- முதல்முறை தாக்கத்திற்க்கு உரிய வயதோ, வேறுக் காராணங்களோ இதுவரை அறியப்படவில்லை.

நோய்க்காரணம்:

- வரும் காரணம் சரியாக தெரியவில்லை.
- ஒரே குடும்பத்தில் உள்ளவர்களுக்கு நோய் ஏற்ப்படுவதற்க்குக் காரணம்
- வம்ச வழி தோற்றமே என அறியலாம்.

அகத்தியர் பரிபூரணம் 400 ல் கன்மநோயைத் தொடர்ந்து வரும்[2] என கூறியுள்ளார்.

“பழவினையால் விஷப்பூச்சி கடித்த தோஷம்

பாதகர்க்கு ஒருநாளும் திர்வ தில்லை. . . . . .

. . . . . .

அடையாளம் விரல்குறுகு மின்னங் கேளே”.

நோய் வரும் வழி[10]:

- மரபு சார் நோயாக இந்நோய்க் கூறப்படுகிறது.
- தன்வினை
- பழவினை
- சுற்றுசுழல் பாதிப்பு
- வளி முதலிய தாது மாறுபாடு
- அடிபடுதல்
- வேதியல் சார்ந்த தொழில்
- அறுவை சிகிச்சையின் பின்விளைவு
- பூச்சி மற்றும் இதரப் பிராணிகளால் ஏற்படும் காயங்கள்
- தீப்புண்கள்
- அக்கி
- வெண்படை
- தந்தை தாய் வழியாலும் இந்நோய் வருவதாக கூறப்படுகிறது.

நோயை அதிகப்படுத்தும் காரணிகள்[1]:

- சுனதாபிதம்
- புப்புசப்பிணிகள்
- ஒவ்வாமை
- மனஉளைச்சல்
- கவலை
- அதிர்ச்சி
- காலமாறுபாடுகள்
- பேதைப்பெண்பருவம்
- பேரிளம்பெண்பருவம்
- குழந்தைப்பிறந்தப் பிறகு வரும் என கூறப்பட்டுள்ளது

நோயை அதிகப்படுத்தும் மருந்துகள்[1]:

- வலிக்குன்மத்திற்குத் தாமிரச்செந்தூரம் கொடுத்தப் போது வலிக்குன்மம் நீங்கி, குணமாகி இருந்த காளாகஞ்சகப்படை தீவிரமடைக்கிறது.
- இளம்பிள்ளைத் தடுப்பு மருந்தான குளோரோகுயின் குருக்களையும், படையையும் உண்டு பண்ணுகின்றது.

நோயின் முற்குறி[10]:

எவ்விதமான முற்குறிகளும் தோன்றுவதில்லை, ஆயினும் திரும்பத் திரும்ப தாக்கக்கூடிய இயல்புள்ள முற்குறியாக சிறு சிறு புள்ளிகள் தோன்றி, அவை பின்னர் விரிவடைந்து பெருகும்.

நோயின் குறிகுணங்கள்[1]:

- தோல் சிவந்து செந்நிறப் பருக்கள் தேகமேங்கும் படைபோல் பரவுதல்.
- தடித்தல்.
- மென்மையும், வெண்மையும், பளபளப்பும் உடைய செதில்களால் மூடப்பட்டிருக்கும்.
- தோல் உரிதல்
- கனத்தல்
- தினவெடுத்தல்
- திடீர் என உடல் வெப்பம் குறைவது போல நடுக்கம்
- செதில்கள்களைச் சொறிய இரத்தக்கசிவு ஏற்ப்படும்
- படை உண்டாம் இடங்களும் படையின் உருவங்களும், அளவும், வடிவமும் வேறுபடுவதுண்டு

- சிறுவர்களில் நீர்துளிகள் போல் உடலிலும் அவயங்களிலும் ஏற்படுவதுண்டு.
- தலையிலும் சிலசமயம் முகத்திலும் குருக்கள் உண்டாகும். நாட்பட்டுவிட்டால் செதில்கள் முழங்கால்களிலும், முழங்கைகளிலும் காணும்.
- சிலருக்கு உள்ளங்கைகளிலும், பாதங்களிலும் தோல் கனத்து வெடித்துச் செதில்கள் தோன்றும்.
- உடல் முழுவதும் பாதிக்கப்பட்டு செதில்கள் அதிக அளவில் உதிர்ந்து சிவந்து காண்பதும் உண்டு.
- நாணயங்கள் போன்ற வடிவத்தைவுடைய படைகள் காணப்படும்.
- கிருமிகளற்ற சீழ்க் கொப்புளங்களும் தோன்றும் படைகள் வட்டங்களாகவும், நீளமாகவும் காட்சியளிப்பதுண்டு.
- பெண்களுக்கு அக்குள், தொடைமடிப்பு, தொப்புள் இவ்விடங்களில் ஏற்ப்பட்டால் நீர்கசிவு எற்படுவதுண்டு.
- சிலநேரம் காய்ச்சல் காணும்.
- நோயுற்றப் பகுதி குறிப்பாகப் பாதங்களின் மூட்டுப் பகுதிகள், மற்றும் தோள்கள், கையின் புறப்பக்கம் ஆகிய இடங்களில் வீக்கம் உண்டாதல்.
- உறக்கம் கெடல்.
- மனஉளைச்சல்.
- அயர்வு
- உணவில் விருப்பமின்மை.
- நோய் முற்றிய நிலையில் வெறுப்பு.

- தனிமையை விரும்புதல்.
- தற்கொலை முயற்சியில் சிலர் இடுபடுவர் உளத்தொடர்பான நிகழ்வுகளும் எற்படும்.

நாடி நடை[6]:

பிணிகளின் முதற் காரணத்தில் தேரையர்

"வாதமலாது மேனிகெடாது"

தேஜஸ் (தேகத்தின் ஒளி) என்னும் அழகும், வன்மையும் கெடுவதற்கு முக்கியமான முதற்காரணம் வளிக்குற்றமேயாகும்.

வளித் தாதுவும் அதைத் தொடர்ந்து ஐயத் தாதுவும் தன்னிலைக் கெட்டு குறிப்பாகத் தோலுக்குறிய உதானன், தேவதத்தன் எனும் வாயுக்கள் தோலில் பெரும் மாற்றங்களைத் தோற்றுவிக்கின்றன.

ஏழு உடற்கட்டுகளில், முதற்கட்டமாக மெய்கெட்டுப் பின்னர் மற்ற உடற்கட்டுகளும் கேடடையும்.

மெய் நீங்கலாக ஏனைய உடற்கட்டுகள் குறைந்த அளவே கேடடைவதால் இந்நோய் தீவிர நிலைக்கு ஆட்படுவதில்லை.

நோய் மிகு நிலையில் அபானன் மற்றும் வியானன் கேடடையும்.

METALS AND MINERALS USED TO TREAT KUTTAM[1]:

- Gandhagam (Sulphur)
- Thambiram (Copper)
- Vangam (Stannum)
- Thalagam (Arsenic sulphide)
- Rasam (Mercury)
- Thurusu (Copper sulphate)
- Ayam (Iron)
- Palagarai (Marine shell)

The trial drug **SwarnaPushpa Rasa Chenduram**contains 3 of the above said drugs.

These are

1. Rasam
2. Gandhagam
3. Vangam

HERBAL DRUGS USED TO TREAT KUTTAM :

1. Serangottai
2. Neeradimuthu
3. Sivanarvembu
4. Kaarbogi
5. Vetpaalai
6. Pungu

DIET RESTRICTION (PATTHIYAM)[1]:

1. Fish, crab, prawn are some seafoods should be avoided.
2. Curd, Jaggery, oil, White gram should be avoided.
3. Non vegetarian diet should be avoided.
4. Alcohol beverages should be avoided.
5. Brinjal should be avoided.
6. In severe cases tamarind should be avoided.
7. Dietary taken salt in minimum quantities.

3.2. MODERN ASPECT OF DISEASE

ANATOMY OF SKIN[4]:

The skin is the protective covering of the body, Skin which covers the entire surface of the human body. The human skin shows 2 wide variations in structure.

1. Thick skin found in Scalp
   Ear lobes
   Palms
   Soles
2. Thin skin over the rest of the body.

- The average thickness of the skin is about 1 to 2 mm.
- In the sole of the foot, palm of the hand and in the inter scapular region, it is considerably thick measuring about 5 mm.
- Skin is very thinnest in eyelids and penis measuring about 0.5mm only.

The skin is composed of a

- Superficial epithelial layer – The epidermis
- Connective tissue layer – The dermis or Corium
- Another Connective tissue layer loose in texture – The hypodermis or subcutaneous layer

STRUCTURE OF EPIDERMIS:

- The epidermis is formed of non vascular stratified epithelium.
- The average thickness of the skin is between 0.07 mm to0.12 mm.
- Certain parts like the soles of the feet and the palms of the hands it is very thick ranging from 0.8mm to1.4mm.
- Squamous epithelium is 10 to 11 cells thick in the palms and soles.
- Squamous epithelium is 3 to 4 cells over the eyelids.
- The nutrition is provided to epidermis by the capillaries of dermis.

The epidermis is mainly divided into two main systems,

1. Malpighian system which forms the bulk (Keratinocytes)
2. Pigmentary system which produce pigment (Melanocytes)

In addition of four types of cells. These are

1. Keratinocytes
2. Melanocytes
3. Langerhans cell
4. Intermittent cells

In the epidermis, another unique cell known as Markel cell or Haascheiben or Touch cells here found at the base of epidermal ridges, which are in contact with nerve fibers, they are mostly present in palms, soles, nail beds, oral and genital epithelium, and act as slow touch receptors.

LAYERS OF EPIDERMIS:

Epidermis layer can be made out microscopically in a section of perpendicular to the skin surfaces, the following 5 main layers of the epidermis.

These are

1. Stratum germinatum
2. Stratum malpighii
3. Stratum granulosum
4. Stratum lucidum
5. Stratum corneum.

1. SRATUM GERMINATUM:

This is the deepest potion of the epidermis and it is composed of columnar cells placed perpendicular to the skin surface, it is also known as basal cell layer.The whole of the epidermis germinates from this stratum hence the name “Stratum Germinatum”Any trauma to this layer would result in scarring; trauma above the level of this layer heals without scarring.Melanoblasts or melanocytes are found in this layer.Stratum Germinatum contain granules of pigment called melanin.

2. STRATUM SPINOSUM:

It is also known as stratum malpighii or the prickle cell layer.It is superficial to the basal cell layer.It is composed of several layers of polyhedral

cells connected to each other by intercellular bridges.Desmosomes present in this layer only.

Half size desmosomes occur on the under surface on the under surface of the basal cells, which play an important part in the anchoring the epidermis and dermis.All keratinocytes adhere together by desmosomes.

3. **STRATUM GRANULOSUM:**

It is superficial to the stratum malpighii. It is composed of flat, fusiform cells which are one to three layers thick, the. Cells contain irregular granules of keratohyalin and lysosomal enzymes and cystine rich proteins.Lamellar granules also known as odland bodies.These odland bodies take part in the waterproof barrier function of the epidermal permeability.

4. STRATUM LUCIDUM:

Superficial to the stratum granulosum.It is pale, wavy looking layer known as stratum iucidum. It is made up of many layers of flattened epithelial cells.This layer contains refractile droplets of eleidin.

5. STRATUM CORNEUM:

This is the most superficial layer, the outer surface of which is exposed to the atmosphere.It is also known as horny layer. It is outer most layers and consists of dead cells, which are called as corneocytes.It consists of many layers of non nucleated, flattened, cornfield cells. It is this layer which becomes thicker with the application of intermittent mechanical pressure.This layer is thickest in the palms of the hands and the soles of the feet, but thinnest on the outer surface of the lips, on the glans penis and the eyes.

DENDRITIC CELLS OF EPIDERMIS:

These are melanocytes, Langerhans cells, and indeterminate cells. The melanocytes are the pigment producing cells and are derived in foetal life from neural crest. The cells of langherhans are found about the middle of epidermis.

The junction of epidermis and dermis is formed by basement membrane(Basal lamina).

DERMIS: (CUTIS VERA OR CORIUM)

Dermis is profusely supplied with blood vessels, Thickness of dermis is 1 to 3 mm, it is made up of dense collagen fibers and fibroblasts. The collagen fibers contain the enzyme collagenase which is responsible for wound healing.

Dermis is made up of 2 layer, these are

1. Superficial papillary layer
2. Deeper reticular layer

1. SUPERFICIAL PAPILLARY LAYER:

The layer projects in to the epidermis, it contains blood vessels, lymphatics and nerve fibers. Dermal papillae are finger like projections arising from the superficial papillary dermis.

2. DEEPER RETICULAR LAYER:

It is made up of reticular and elastic fibers.It is found around the hair, sweat glands and sebaceous glands.It also contain mast cells, Nerve ending, lymphatics and fibroblasts.

APPENDAGES OF THE SKIN:

The appendages of the skin are five these are,

1. Sweat gland
2. Sebaceous gland
3. Hair
4. Arrector pili muscle
5. Nails.

1. SWEAT GLAND:

These are 2 types

i. Eccrine gland

ii. Apocrine gland

i. ECCRINE GLAND:

They are the ordinary, small sized 0.3 mm to 0.4 mm.Sweat glands are distributed all over the skin except on the beds of nail, margins of lips and the glans penis. Over 3 million sweat gland present at birth.

ii. **APOCRINE GLAND:**

Glandular portion is very large and may measure 3 mm to 5 mm in diameter.

They occur in the axilla, areola and nipples of breasts, umbilicus, around the anus and the genitalia.They are specialized sweat glands, and their secretion is odoriferous with secondary sexual significance.

2. SEBACEOUS GLAND:

They are scattered all over the integument in association with the hair follicles.They are absent from the hairless portions of the body like the palms of the hands, the soles of the feet.The ducts of the sebaceous glands are lined by stratified squamous epithelium which is continuous with the external sheath of the hair, and with the malpighian layer of epidermis.

3. HAIR:

Hair is fund on almost every part of the body surface except on the palms, soles, the dorsal surface of the terminal phalanges, the inner surface of the labia, the inner surface of the prepuce and the glans penis.Hairs differ in length, thickness and colour in different parts of the body and in different races.There are three types of hair, long, short, thick bristles.Hair grows about 1-2 cm per month.

Hair follicle and its hair can be anatomically divided in to 3 segments

Infundibulam

Isthumus

Inferior

4. ARRECTOR PILI:

Arrector pili muscles are the small bundles of plain muscles fibers, which is extend from the connective tissue sheath of the hair follicles to the epidermodermal junction.When these contract under the effect of cold or emotions.They move the hair into a more vertical portion is called appearance of “ghoose flesh”.

5. NAILS:

These are semi transparent, plate like horny structure, covering the dorsal surfaces of the distal phalanges of the fingers and toes.Nail parts are :

Root

Nail plate

Nail bed

Lunula

Lateral and posterior nail fold

BLOOD VESSELS OF SKIN[12]:

The blood supply of the skin originates from the large number of arteries forming anastomosis in the deepest part of the dermis. From the single vessels run upwards and form a second network in the upper dermis.Finally terminal arterioles ascend in to the papillae ending in capillary loops, which drain into connective venules.The blood is returned to the large veins in the subcutaneous tissues.

LYMPHATICS OF THE SKIN[12]:

The skin contains a rich network of lymphatics which drains in to a larger vessel in the hypodermis.

NERVE SUPPLY OF SKIN[12]:

The nerve supply of the skin consists of a motor sympathetic portion derived from the sympathetic ganglia.Sensory spinal portion arising from the dorsal root ganglia.

PHYSIOLOGY OF SKIN[13]:

The skin performs a multiple of functions, though the primary function of skin is the protection of organs, it has many other important functions.

These are

1. Protective function
2. Sensory function
3. Storage function
4. Synthetic function

5. Regulation of body temperature
6. Regulation of water and electrolyte balance
7. Excretory function
8. Absorptive function
9. Secretary function
10. Gaseous exchange

1. PROTECTIVE FUNCTION:

Skin forms the covering of all organs of the body and protects these organs from the following factors:

i. Bacteria and toxic substances
ii. Mechanical flow
iii. Ultraviolet rays

2. SENSORY FUNCTION:

Skin is considered as the largest sense organs in the body. It has many nerve endings, which form the specialized cutaneous receptors. These receptors are stimulated by the sensations of touch, pain, pressure or temperature sensation and convey these sensations to the brain via afferent nerves.

3. STORAGE FUNCTION:

Skin stores fat, waters, chlorides and sugar. It can also store blood by the dilatation of the cutaneous blood vessels.

4. SYNTHETIC FUNCTION:

Vitamin D_3 is synthesized in skin by the action of ultraviolet rays on cholesterol.

5. REGULATION OF BODY TEMPERATURE:

Skin plays an important role in the regulation of body temperature. Excess heat is lost from body through skin by radiation, conduction and evaporation.

6. REGULATION OF WATER AND ELECTROLYTE BALANCE:

Skin regulates water balance and electrolyte balance by excreting water and salts through sweat.

7. EXCRETORY FUNCTION:

Skin can excrete small quantities of waste materials like urea, salts and fatty substances.

8. ABSORPTIVE FUNCTION:

Skin can absorb the fat soluble substances and some ointments.

9. SECRETORY FUNCTION:

Skin regulates sweat through sweat glands and sebum through sebaceous glands. Sebum keeps the skin smooth and moist.

10. GASEOUS EXCHANGE:

A small amount of gaseous exchange through the skin.

PSORIASIS

DEFINITION

The word psoriasis is derived from the Greek word **"PSORA"** meaning **"ITCH" or"RASH".** The name psoriasis was given by the Viennese dermatologist Von Hebra.

Psoriasis is a common, non-contagious and chronic skin disease characterized by well defined slightly raised, dry erythematous macules with silvery Scales, and typical extensor distribution[11].

It commonly causes red scaly patches to appear on the skin. The scaly patches caused by psoriasis, called plaques, are areas of inflammation and excessive skin production. Skin rapidly accumulates at these sites and takes a silvery-white appearance. Plaques frequently occur on the skin of the elbows and knees, but can affect any area including the scalp and genitals.

Psoriasis is an inflammatory skin disease in which skin cells replicate at an extremely rapid rate. New skin cells are produced about eight times faster than normal--over several days instead of a month--but the rate at which old cells slough off is unchanged. This causes cells to build up on the skin's surface, forming thick patches, or plaques, of red sores (lesions) covered with flaky, silvery-white dead skin cells (scales).

EPIDEMIOLOGY[14]:

PREVALANCE

- It affects 0.6%-4.8% of people worldwide.
- Men and women are equally affected.
- It is pandemic in temperate climate.
- First peak of onset between 20-30 yrs.
- Second peak of onset between 50-60 yrs.
- 1,50,000-2,60,000 new cases of psoriasis are diagnosed each year.
- About 400 people die from complications caused by psoriasis every year.
- About 11% patients have psoriatic arthritis.
- Plaque type is most common in 80% of psoriasis patients.

AETIOLOGY[11]:

1. The exact cause is unknown- Autoimmune Disease
2. Stress
3. Hormonal imbalance
4. Septic focus
5. Allergy
6. Anxiety states
7. Lowered response of the cyclic AMP system to prostaglandin E_1 in epidermis
8. Mental trauma
9. Fever
10. Digestive upsets
11. Physical injury:
    - Scratches
    - Surgical incisions and injuries

12. Infection:

β - Hemolytic streptococcal infection- precipitates guttate lesions.

HIV infection-Explosive psoriasis.

13. Herido familial and Genetic factors:

Increased in familial cases

Increased association of HLA- CW6 20 times increased risk with early onset of psoriasis

PATHOGENESIS OF PSORIASIS:

Psoriasis appears to be largely a disorder of keratinization

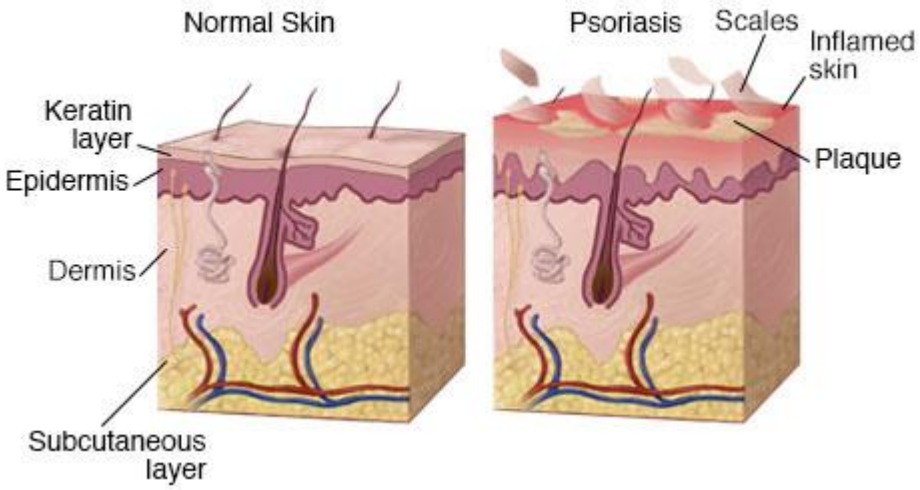
↓

The basic defect is rapid replacement of epidermis in psoriatic lesion.

3 to 4days instead of 28 days in normal skin.

↓

There are marked vascular changes in upper dermis in the form of Recently the presence of abnormal neural cells has been demonstrated in Psoriatic plaques.



- Psoriasis was long considered either a disorder of keratinocytes growth or a chronic inflammation.

- Advancement in immunologic techniques and in genetic analyses has resulted in a reappraisal of the pathophysiology involved.
- Psoriasis consider as an organ specific autoimmune disease that is triggered by an activated cellular immune system and it similar to other immune mediated disease.
- The definition of autoimmune disease as **"a clinical syndrome caused by the activation of T cells and B cells, or both, in the absence of an ongoing infection or other discernable cause"**
- Pathogenesis of psoriasis still poses a challenge to the scientific community to once and for all, establish how and why it occurs and consequently to develop the magic drug to treat it.
- Psoriasis is an immunological disease, characterized by interplay of

I. Immunological factors.
II. Cellular components.
III. Signaling molecules.
IV. Biochemical changes.
V. Histological changes.

These are plays major role in pathogenesis.

I. IMMUNOLOGICAL F ACTORS IN PSORIASIS[15]:

Both innate or acquired immune changes are thought be responsible for the Development of psoriatic plaques

↓

Different types of helper T subsets, dendritic cells, plasmacytoid dendritic cells as well as Langherhans cells have been found to play a role in psoriasis.

↓

T cells plays important role in psoriasis

↓

Autoimmunity as a major factor in pathogenesis

↓

The presence of T cells in the inflammatory infiltrate in psoriatic plaque obviously Indicated in immune mediated or an autoimmune basis for the Pathogenesis of psoriasis.

II. CELLULAR COMPONENTS IN PATHOGENESIS OF PSORIASIS:

Cellular components are

a) T cells
b) Keratinocytes
c) Langherhans

A. T CELLS:

- T cells play a key role, with the epidermal T cells being CD8+ & Dermal cells being CD4+.
- These cells include memory T cells, natural killer cells T cells& Th17& Th22.
- Th17& Th22 cells which are subsets of CD4+ cells are now considered important in pathogenesis of the psoriatic plaque.
- They are stimulated by IL-23 & respectively produce IL-17& IL-22 which mediate dermal inflammation and epidermal hyperplasia.

B. KERATINOCYTES:

- Keratinocytes cells express transcription factor STAT- 3, which may be pathogenic.

C. LANGERHANS CELLS:

- Langherhans cellssecrete cytokines, which are mitogenic and chemotatic.

III. SIGNALLING MOLECULES IN PATHOGENESIS OF PSORIASIS:

- Include cytokines growth factors like interleukins, Chemokines, Interferon's and their respective receptors.
- Characterized by up regulation of Th1 cytokines and reduction of anti inflammatory cytokines IL-10.
- Other important molecules include TNF-α, IL-15, IL-17, IL-22 and IL-23

IV. BIOCHEMICAL CHANGES INPATHOGENESIS OF PSORIASIS:

- Cyclic nucleotide increased levels in cGMP or decreased levels of cAMP.
- Arachidonic acid level is increased and it metabolites.

- Polyamines also increased in levels.
- PROTEINASE: increased in levels of plasminogen activator and their inhibitors.
- Calmodulin also increased in levels.

V. HISTOLOGICAL CHANGES INPATHOGENESIS OF PSORIASIS:

- Epidermal changes is increased epidermal proliferation in two ways
- One is increased growth fraction from normal of 30 to 100% in psoriasis.
- 2nd is shortened epidermal turn over time from normal of 60 to10 days in psoriasis.
- Important changes seen in dermal layer.
- Include dilated and tortuous capillary loops and proliferation of fibroblasts.
- Secondary lichenification present
- Scalp is involved almost all cases
- No matting of hair

MOST COMMON SITES[11]:

AREAS COMMONLY AFFECTED:

- Scalp
- Back of elbows
- Front of knees and legs
- Lower part of the back of the trunk

MAY ALSO BE AFFECTED:

- Nail
- Sole
- Palm

RARELY AFFECTED:

- Mucus membrane

CLINICAL FEATURS OF PSORIASIS[11]:

- Typical distribution is extensor
- Lesions are bilaterally symmetrical
- Typical coin shaped lesion
- Big plaques of the size of palm of the hand
- The lesions are slightly raised above the surface of skin
- Absence of itching
- But itching present in tropical countries
- Slight or moderate purities present
- Secondary psychogenic stress present

IMPORTANT SIGNS OF PSORIASIS[15]:

1. Candle greeze sign.
2. Auspitz sign.
3. Koebner's phenomenon.

1. CANDLE GREEZE SIGN(Tache de bouge) :

Psoriatic lesion is scratched with the point of a dissecting forceps a candle greeze like scale can be repeatedly produced even from the non scaling lesions this is called candle greeze sign (Tache de bouge)

2. AUSPITZ SIGN:

The complete removal of scale produces pin point bleeding. There are 3 steps to this test:

STEP 1: Gently scrape lesion with a glass slide. This accentuates the silvery scales **(GRATTAGE TEST POSITIVE)** scrape off all the scales.

STEP 2: As you continue to scrape the lesion, a glistening, white adherent **membrane(BERKLEY'S MEMBRANE)** appears.

STEP 3: On removing the membrane, punctuate bleeding points become visible, this is positive AUSPITZ SIGN.

3. KOBNER'S PHENOMENON:

Psoriatic lesions may develop along the scratch lines in the active phase this is called Koebner's phenomenon.

TYPES OF PSORIASIS[11] :

- Plaque Psoriasis
- Nail Psoriasis
- Guttate Psoriasis
- Inverse Psoriasis
- Pustular Psoriasis
- Erythrodermic Psoriasis
- Psoriatic Arthritis

PLAQUE PSORIASIS:

The most common form, palque psoriasis causes dry, raised,red skin lesions(plaque) covered with silvery scales. The plaques might be few or itchy or painful and there may be few or many. They can occur anywhere on your body, including your genitals and the soft tissue your mouth.

NAIL PSORIASIS:

Psoriasis can affect fingernails and toenails, causing pitting, abnormal nail growth and discoloration. Psoriatic nails might loosen and separate from the nail bed. Severe cases may causes the nail to crumble.

GUTTATE PSORIASIS:

This type primarily affects young adults and children. Its usually triggered by a bacterial infection such as strep throat. Its marked by small, water-drop-shaped, scaling lesions on your trunk, arms, leg and scalp. You may have a single outbreak that goes away on its own, or you may have repeated episodes.

INVERSE PSORIASIS:

This mainly affects the skin in the armpits, in the groin, under the breasts and around the genitals. Inverse psoriasis causes smooth patches of red, inflamed skin that worsen with friction and sweating. Fungal infection may trigger this type of psoriasis.

PUSTULAR PSORIASIS:

This uncommon form of psoriasis can occur in wide spread patches(generalized pustular psoriasis) or in smaller areas on your hands, feet or fingertips.

It generally develops quickly,with pus-filled blisters appearing just hours after your skin becomes red and tender. The blisters may come and go frequently. Generalized pustular psoriasis can also cause fever, chills, severe itching and diarrhea.

ERYTHRODERMIC PSORIASIS:

The least common type of psoriasis, erythrodermic psoriasis can cover your entire body with a red, peeling rash that can itch or burn intensely.

PSORIATIC ARTHRITIS:

In addition to inflamed, scaly skin, psoriatic arthritis causes swollen, painful joints that are typical of arthritis. Sometimes the joint symptoms are the first or only manifestation of psoriasis or at times only nail changes are seen. Symptoms range from mild to severe and psoriatic arthritis can affects any joint. Although the disease usually is not as crippling as other forms of arthritis, it can cause stiffness and progressive joint damage that in the most serious cases may lead to permanent deformity.

COMPLICATIONS[11]:

Psoriatic arthritis:

This complication of psoriasis can cause joint damage and a loss of function in some joints, which can be debilitating.

Eye conditions:

Certain eye disorders-such as conjunctivitis, blepharitis and uveitis-are more common in people with psoriasis.

Obesity:

People with psoriasis especially those with more severe disease, are more likely to be obese. Its not clear hoe these diseases are linked, however. The inflammation linked to obesity may play a role in the development of psoriasis. Or it

may be that people with psoriasis are more likely to gain weight, possibly because they are less active because of there psoriasis.

Type 2 diabetes:

The risk of type 2 diabetes raises in people with psoriasis. The more severe the psoriasis, the greater the likelihood of type two diabetes.

High blood pressure:

The odds of having high blood pressure are higher for people with psoriasis.

Cardiovascular disease:

For people with psoriasis, the risk of cardiovascular disease is twice as high as it is for those without the disease. Psoriasis and some treatments also increase the risk of irregular heartbeat, stroke, high cholesterol and atherosclerosis.

Metabolic syndrome:

This cluster of conditions-including high blood pressure, elevated insulin levels and abnormal cholesterol levels-increases your risk of heart disease.

Other autoimmune diseases:

Celiac disease, sclerosis and the inflammatory bowel disease called crohn's disease are more likely to strike people with psoriasis.

Parkinson's disease:

This chronic neurological condion in more likely to occur in people with psoriasis.

Kidney disease:

Moderate to severe psoriasis has been linked to a higher risk of kidney disease.

Emotional problems:

Psoriasis can also affect your quality of life. Psoriasis is associated with low self-esteem and depressions. You may also withdraw socially.

DIFFERENTIAL DIAGNOSIS OF PSORIASIS[15]:

S.NO	TYPE OF RASH	DISTRIBUTION	MORPHOLOGY
1	**ECZEMA**	Face/ Flexures	Poorly defined Erythema and scaling lichenification
2	**SEBORRHOEIC DERMATITIS**	Scalp, axilla, sterna region	Scalp patches are diffuse, ill-defined and moist, hair is matted with crust.
3	**PITYRIASIS ROSEA**	"Fire tree pattern" on torso	Well defined erythematous papules and plaques with scales
4	**DRUG ERUPTION**	Wide spread	Maculopapular erythematous scaly areas which merge and are followed by exfoliation
5	**PITYRIASIS VERSICOLOR**	Upper torso and upper shoulders	Hypo and hyper pigmented scaly patches
6	**LICHEN PLANUS**	Distal limbs, especially wrists and lower back	Shiny,flatopped violaceous papules with Wickham's striae
7	**TINEA CORPORIS**	Asymmetrical, often isolated, red scaly lesions	Scalyplaques which expand With central healing

LAB INVESTIGATION OF PSORIASIS[15]:

Skin biopsy shows the following as

EPIDERMAL CHANGES:

- ❖ Parakeratosis
- ❖ Loss of granular layer and regular acanthosis
- ❖ Supra papillary thickening
- ❖ Collection of polymorphs in the epidermis to form spongiform pustule of kogoj and Munro's micro abscess seen in epidermis.

DERMAL CHANGES:

- ❖ Dilatation and tortuosity of capillary loops in the dermal papillae
- ❖ Lymphocytic infiltrate in the upper dermis is seen.

HISTOLOGICAL CHANGES:

- ❖ Thinning of supra papillary portion of stratum malpinghii
- ❖ Elongation of ridges
- ❖ Oedema and clubbing of papillae seen in histological study.

HISTOCHEMICAL CHANGES:

- ❖ Histochemical studies have revealed an increase in both oxidative and anaerobic metabolism with increased pentose, glycon, purines, sulphydral groups, soluble proteins increased in level.
- ❖ Decreased in activity of dipeptidases.
- ❖ It has been discovered that apparently normal skin of both the psoriatics and their relations show these changes in miniature is called LATENT PSORIASIS

RADIOLOGICAL CHANGES:

- ❖ . Simultaneous presence of ankylosis, periosteal new bone formation, erosions and osteolytis are strongly suggestive of psoriatic arthritis.

TREATMENT OF PSORIASIS PATIENTS[15]:

Depending on the type of psoriasis, various therapeutic options are available

- ❖ Topical agents like liquid paraffin, petroleum gel, vegetable oils etc.

- Systemic agents like Methotrexate, Acitretin, and Cyclosporine.
- Corticosteroids mostly in cream base.
- Photochemotherphy and phototherapy in PUVA methods.
- Biological response modifiers used in treatment of psoriasis.

DIET FOR PSORIASIS PATIENTS:

TO TAKE:

1. All green leafy vegetables.
2. Low consumption of animal fats and the quantity of food.
3. High protein diet
4. Fish and sea foods
5. Carrot
6. Tomatoes
7. Grains.

TO AVOID:

1. Oil foods.
2. High fat diet
3. Alcohol
4. Junk foods
5. Red meat
6. Dairy products
7. Night shade vegetables
8. Citrus fruits
9. Gluten protein in diet
10. Condiments.

PROGNOSIS[11]:

- A permanent cure is not yet known
- Individual attacks can, almost always controlled satisfactorily
- Disease non infectious
- The disease does not leave scar

- ❖ Flexural, erythrodermic and pustular psoriasis take longer to heal than the typical variety
- ❖ The palmar and nail lesions are rather resistant to treatment.
- ❖ Patient suffer from the disease on and off throughout their lives.
- ❖ Complications in psoriasis are infrequent.

MANAGEMENT[11]:

- ❖ The general health of the patient should be maintained.
- ❖ The patient's life should be regulated so that no undue stress affects either body (or) mind.
- ❖ A moderate, warm climate, frequent sunbaths before the onset of the winter, and visits to sulphur springs, all of which are useful in bringing down the relapse rate.
- ❖ Natural sulphur baths should be taken during the holidays, especially in the winter season.

DRUG REVIEW

3.3. INTERNAL MEDICINE: SWARNA PUSHPA RASA CHENDHURUM

INGREDIENTS:

Gandhagam (Sulphur)

Velvangam (Stannum)

Navacharam (Ammonichloridum)

Rasam (Hydragyrum)

Kalyanapoosanikai (*Benincasahispida*)

GANDHAGAM

RASAM

NAVACHARAM

VELVANGAM

GANTHAGAM(SULPHUR):

நெல்லிக்காய்க்கந்தகத்தின் பொதுகுணம்[16]:

"நெல்லிக்காய்க் கந்திக்குநீள் **பதினெண்குட்ட மந்தம்**

வல்லை கவிசைகுன்ம வாயுகண்ணோய் - பொல்லா

விடக்கடிவன் மேகநோய் வீறுசுரம் பேதி

திடக்கிரசுணீ கபம் போனந்தேர்."

INTRODUCTION[17]:

- Sulphur forms an essential constituent of many natural products of plant and animal origin e.g., Garlic, mustard, eggs, hair etc.
- It also occurs as hydrogen sulphide in spring waters, coal gas, sewage etc.

GENERAL PROPERTIES:

IUPAC NAME	:	Sulphur
SYMPOL	:	S
ATOMIC NO	:	16
PHASE	:	Ore
MELTING POINT	:	388.36^0C (114.00K)
BOILING POINT	:	717.8^0C (444.6K)

PROPERTIES OF SULPHUR:

- Sulphur is a yellow solid with no state and odour.
- It is freely soluble in carbon di sulfide but insoluble in water and only sparingly soluble in alcohol and ether.

- Sulphurvapors are poisonous to had bacteria and fungi but not for animals or human beings.
- It combines directly with carbon, phosphorus, arsenic and many of the metals at high temperatures, giving the corresponding sulphides.
- As disinfectant it is used to destroy had bacteria, Fungi in household purpose

USES:

- This is considered to useful in the treatment of 18 types of skin diseases.

RASAM (HYDRAGYRUM)[16]:

ரசம் பொதுகுணம்:

"விழிநோய் கிரந்திகுன்மம் மெய்ச்சூலை புண்குட்

டழிகாலில் விந்துவினால் அத்தை – வழியாய்

புரியுவிதி யாதுபுரியினோ யெல்லாம்

இரியு விதியாது மில்லை."

INTRODUCTION[17]:

- Mercury is obtained from ores in countries like spain, china & japan.
- It is separated from its cinnabar.
- Mercury of commercial grade available in shops is in impure from, found mixed with lead, tin, sand, dust etc.
- The mercury obtained from cinnabar is considered as pure and suitable for medicinal purposes.

GENERAL PROPERTIES:

IUPAC NAME	:	Hydragyram
SYMPOL	:	Hg
ATOMIC NO	:	80

PHASE : Liquid

MELTING POINT : 38.9^0C (234.321O K)

BOILING POINT : 356.6^0C (629. 88 K)

PROPERTIES OF RASAM:

- It purifies blood
- Kills the micro-organism and cures the ulcers
- It cures the disease of internal and external organs of the body
- It strengthens the nerve plexus
- It develops wisdom through concentration of mind
- It prevents the senility and increases the life span

USES:

- Mercury vapor lamps are used as a source of ultraviolet light.
- Mercury and its compounds are extensively used in medicine.
- Proper use of mercury medicine, cures the diseases of eyes, throbbing pain, 8 types of ulcers, chronic ulcer, leprosy and kuttam diseases.

VELVANGAM (STANNUM)[16]:

வெள்வங்கம் பொதுகுணம்:

“தாகங் கரப்பான் சலமேகம் பித்தகப
மேகமொளி மங்கல் வெப்புபலம் – மாகிரந்தி
துள்ளிய மந்தார சுவாசமு மந்தாக்கினியும்
வெள்ளீயம் போக்கும் விதி.”

INTRODUCTION[17]:

- Velvangam is also known as Velleeyam, Vengalam, Kudiyam and Thavalavangam

- There are two types of velvangam. One is kuragam which is white in colour has the quantities of thickness, soft, oily, coolness, easily melting and soundless etc..
- Another one is misaragam has the mixed colour of white and black.

PROPERTIES OF VELVANGAM:

- Stannum has got antiseptic and demulcent properties.
- It is astringent taste
- It is hot in potency

USES:

- It has also got the property of reducing edema
- Stannum is used for the treatment of eczema, certain skin diseases

NAVACHARAM (AMMONIUM CHLORIDE)[16]:

நவாச்சாரவைப்பு பொதுகுணம்:

"குன்மம் குடற்சூலை கொல்லும்ம கோதரத்தை
வன்மையுறு கல்லடைப்பை மாற்றுங்காண் – சன்மக்
கவிச்சு முத்தோடங் கனவாத நீக்கும்
நவச்சார மாதே நவில்".

INTRODUCTION[17]:

- Other names of navacharam is istigai, salligai, sooligai and padu
- This is available in small quantities in brick stone furnace.
- This is also obtained by sublimation of coal, salt and dung ashes of camel.
- It has no smell.
- Solid in state.

- Fibre in nature and so it is hard to powder.
- It is dissoluble in water and alcohol.

GENERAL PROPERTIES:

IUPAC NAME	:	Ammonium chloride
SYMPOL	:	NH_4CL
PHASE	:	powder form
MELTING POINT	:	$338^0C(640^0F$; 611 K)
BOILING POINT	:	$520^0C(968^0F$;793 K)

PROPERTIES OF NAVACHARAM:

- In a small doses given for a long period, improves the body strength
- It is also having stimulant and diaphoretic activity.

USES:

- It has also used for the bad odour in the skin
- This is also effective for scabies, eczema, Herpes zoster and Hansen's diseases.

KALIYANA PUSHNIK-KAY

கலியாணப்பூசணிக்காய் பொதுகுணம்[20]

"பெரும்பூசணிக்காய்க்குப் பித்தமோடுட் காய்ச்சல்
அருஞ்சார நீர்க்கட்டருகல் – மருந்திடுல்
பித்தசுரம் அஸ்திசுரம் பேய்வறட்சி மேகமும்போம்
மெத்த அனில முறும்விள்".

BOTANICAL NAME: *Benincasahispida*

FAMILY NAME: cucurbitaceae

OTHER NAMES: kushmanda,

CHEMICAL CONSTITUENTS: volatile oils,glycosides

PHARMACOLOGICAL ACTIVITY: antioxidant activity

USES: It cures wounds.

3.4 EXTERNAL MEDICINE:VETTIVER THYLAM

INGREDIENTS:

- Vettiver (*Vetiveriazizanioides*)
- Athimathuram (*Glycyrrhizaglabra*)
- Karunseeragam (*Nigella sativa*)
- Devadharam (*Cedrusdeodara*)
- Kadukkai (*Terminaliachebulae*)
- Gingilley oil (*Sesamumindicum*)

Vettiver

Devadharam

Athimathuram

Kadukkai

Karunseeragam

Gingilee

VETTIVER

வெட்டிவேர்பொது குணம்[20]:

"பித்த விதாகம்சகி காமிலங்கறைப் பித்தமனற்
றத்திடு குட்டஞ் சிரநோய்களமடி தாதுநட்ட
மத்தம நற்புண்டனப் புண்வன் மூர்ச்சைவிரி வழிநோய்
வித்திரமேகத் தின்கட்டியும் போம்வெட்டி வேரினுக்கே".

BOTANICAL NAME: *Vetiveriazizanioides*

FAMILY NAME: poaceae

OTHER NAMES: khaskhas grass, kuskus grass, vetiver

PHARMACOLOGICAL ACTIVITY: It has antioxidantactivity

USES: It is very effective in preventing acne.

ATHIMATHURAM

அதிமதுரம் பொதுகுணம்[20]:

"கத்தியரி முப்பிணியால் வருபுண் தாகங்
கண்ணோய் உன்மாதம் விக்கல்வலி வெண்குட்டம்
பித்தமெலும்பு ருக்கிகிரிச்சரம் ஆவர்த்த
பித்தமத மூர்ச்சைவிடபாகம் வெப்பந்".

BOTANICAL NAME: *Glycyrrhizaglabra*

FAMILY NAME: fabaceae

OTHER NAMES: liquorice, licorice

CHEMICAL CONSTITUENTS: glycyrrhizin,glycyrrhizinic acid

PHARMACOLOGICAL ACTIVITY: It has antimicrobial and antioxidant activity

USES: It can be used to fight dermatitis, eczema and psoriasis.

KARUNSEERAGAM

கருஞ்சீரகம் பொதுகுணம்[20]:
கருஞ்சீரகத்தாள் கரப்பனொடு புண்ணும்
வருஞ்சிராய் பிநசமு மாற்றும் – அருந்தினால்
காய்ச்சல் தலைவலியுங் கண்வலியும் போமுலகில்
வாய்ச்ச மருந்தென வேவை.

BOTANICAL NAME: *Nigella sativa*

FAMILY NAME: Rananculaceae

OTHER NAMES: Black-caraway, black-cumin, fennel-flower,kalongi

CHEMICAL CONSTITUENTS: Thymoquinone, thymol, carvacrol

ACTIONS: Anthelmintic, parasiticide

PHARMACOLOGICAL ACTIVITY: It has Anticancer activity and anti-proliferant property

USES: eczema, scabies

DEVADHARAM

தேவதாருபொதுகுணம்[20]:
‘‘சரளமெனுந் தேவதாரு வினாற் கண்ணீர்
விரளமாகுங் குபமும் வீடுந் – தரளவெயிற்
றாமயஞ்சு வாசவலி யண்ணாதம் கம்பக் காற;
போமச் சுரத்துரமும் போம்’’.

BOTANICAL NAME: *Cedrusdeodara*

FAMILY NAME: Pinaceae

OTHER NAMES: deodar cedar, deodar

CHEMICAL CONSTITUENTS: 9- hydroxyl-dodecanoic acid, ethyl laurate

PHARMACOLOGICAL ACTIVITY: It has Anti-bacterial Activity.

USES: It cures eczema and psoriasis.

KADUKKAI – ***கடுக்காய் பொதுகுணம்***[20]

தாடை கழுத்தக்கி தாலு குறியிவிடப்
பீடை சிலிபதமுற் பேதிமுடம் – ஆடையெட்டாத்
தூலமிடிபுண் வாதசோணி காமாலையிரண்
டாலமிடி போம் வரிக்காயால்

BOTANICAL NAME: *Terminaliachebulae*

FAMILY NAME: Comberetaceae

OTHER NAMES: Chebulicmyrobalan

CHEMICAL CONSTITUENTS: Ellagic acid, Chebulinic acid

PHARMACOLOGICAL ACTIVITY: It has Anti-proliferantproperty ,It has anti-oxidant property

USES: It cures Kuttam

GINGILEE OIL

எள்ளின்நெய் பொதுகுணம்[20]:

"புத்திநயனக்குளிர்ச்சி பூரிப்புமெய்ப் புளகஞ்

சத்துவங் கந்திதனி யிளமை - மெத்தவுண்டாங்

கண்ணோய் செவிநோய் கபாலவழல் காசநோய்

புண்ணோய்போ மெண்ணெய் யாற்போற்று."

BOTANICAL NAME: *Sesamumindicum*

FAMILY NAME: Pedaliaceae

OTHER NAMES: Sesame, Sesamum

PHARMACOLOGICAL ACTIVITY: Anti-oxidant activity

CHEMICAL CONSTITUENTS: Sesamin,Sesamolin, Linoleic Acid, Oleic Acid, Palmitic Acid

USES: Oil used for cooling effect, External application for Wounds and scabies.

3.5 PRANAYAMAM

Pranayamam mainly act via down regulating the HPA axis (Hypothalamic Pituitary Adrenal axis) that trigger as a response to a physical or psychological demand, leading to release of cortisol and catecolamines (epinephrine, nor-epinephrine). Repeated firing of the HPA Axis can lead to the deregulation of the system and ultimately diseases such as obesity, diabetes mellitus, autoimmune diseases, cardiovascular disorder.

PRANAYAMAM STEPS:

- Close your eyes
- Close the right nostril with the right thumb
- Inhale slowly through the left nostril
- Remove your thumb from your right nostril
- Use your ring and middle finger to close your left nostril
- Exhale slowly and completely with the right nostril

BENEFITS OF PRANAYAMAM:

- With this pranayama you will instantly experience peace and blissfulness
- It is said in the yoga science this pranayama cleanses, 72,000 Nadis or channels in the body
- It helps purify the blood and the respiratory system
- The deeper breathing enriches the blood with oxygen

s

4. MATERIALS AND METHODS

SELECTION OF DRUGS:

I have selected the trial drugs **"SwarnaPushpa Rasa Chendhuram" (Int)** for this study from Classical Siddha literature **SikichaRathinaDeepam-KannusamyPillai** Page No:240, **"VettiverThylam" (Ext)** from **AathmaracchamirthaVaithiyaSaarasangragam** Part-1 Page No:527 and **"Pranayamam"**.

The raw drugs were procured from the raw drug shop R. N. Rajan and Co, Chennai. After proper authentication by the Pharmacognosist, Govt Siddha Medical College, Arumbakkam, Chennai, the preparation was made. My CTRI No is REF/2017/04/014066.

INTERNAL DRUG: SWARNA PUSHPA RASA CHENDHURAM

INGREDIENTS:

- Purified Rasam (Hydragyrum)
- Purified Gandhagam (Sulphur)
- Purified Velvangam (Stannum)
- Purified Navacharam (Ammonichloridum)
- Kalyanapoosanikai*(Benincasahispida)*

4.1 PURIFICATION OF THE DRUG INTERNAL SWARNA PUSHPA RASA CHENDHURAM (SPRC)[16]:

PRECAUTIONS CARRIED OUT DURING PURIFICATION TECHNIQUE:

1.It was carried out in open space.

2. Mask was weared.

3. Before flaming care has been taken to wipe out the side of all the instruments.

4. Avoid to touching the drug while washing.

PURIFICATION OF SULPHUR (GANDHAGAM)

MELTING AND POURED INTO LIQUID METHOD (URUKI SAITHAL MURAI)

MELTING

POURING

PURIFIED GANDHAGAM

MATERIALS USED:

Gandhagam -100g, Milk-1liter.

EQUIPMENTS USED:

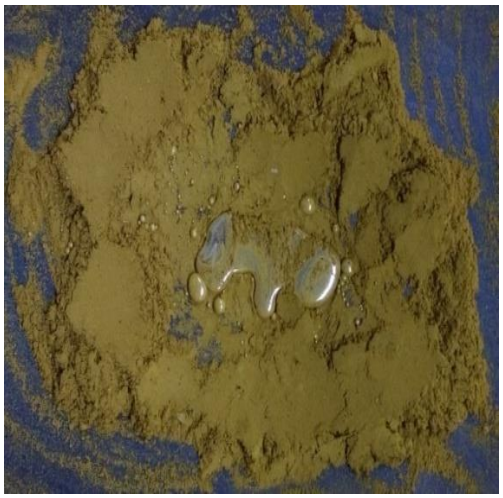
Iron spoon, mud pot, stove, tissue paper.

PROCEDURE:

Gandhagam is placed in an iron spoon, the spoon is heated till the gandhagam melts. Then it is poured in milk. This is repeated for 2 times. After that gandhagam is taken out and washed with cool water and allowed it to dry.

PURIFICATION OF MERCURY (RASAM):

Trituration of Hg with Turmeric



Added Brick powder

After purification of mercury

MATERIALS USED:

Mercury-100g, Brick powder, Turmeric powder, Acalyphaindica Leaf juice

EQUIPMENTS USED:

Stove, mud plate

PROCEDURE:

100 g of mercury was triturated with brick powder and turmeric powder and washed with water. Then the mercury was boiled with acalypha leaf juice for about 30 minutes.

PURIFICATION OF VELVANGAM (STANNUM):

MATERIALS USED:

Velvangam – 100g, vitexnegundo juice, turmeric

EQUIPMENTS USED:

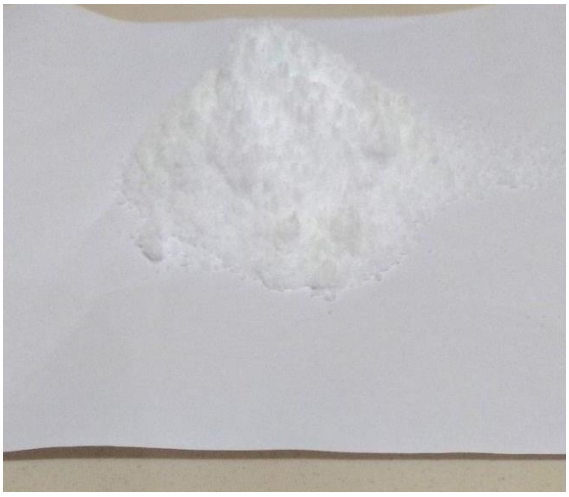
Stove, iron spoon

PROCEDURE:

Place velvangam in iron spoon and heated. The melted velvangam is poured into vitexnegundo juice and turmeric(Curcuma longa). Repeat it for 2 times.

PURIFICATION OF NAVACHARAM (AMMONICHLORIDUM) :

Navacharam



After purification of Navacharam

MATERIALS USED:

Navacharam – 100g

EQUIPMENTS USED:

Hot water, Vessel

PROCEDURE:

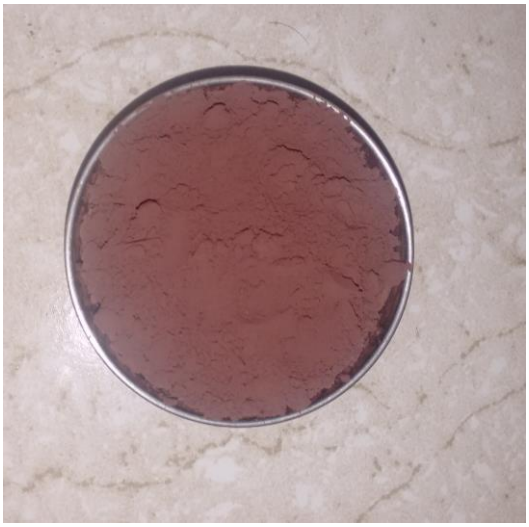
Mix it with hot water and filtered. After self cooling keep it in sunlight. Now the salt settles down at the bottom of the vessel.

4.2 STANDARD OPERATING PROCEDURE FOR SWARNA PUSHPA RASA CHENDHURAM (INT)[18]:

P.Velvangam is to be melted andslightly cool. Added with P.Rasamand grinded well. P. Navacharam and P. Gandhagam are added and grinded with lemon juice for 12 hrs.Make it into poultices (Villai), dry it and keep inside the small mud pot. Place small mud plate over small mud pot and sealed by 7 layers of mud pasted cloth. Next the big mud pot is filled with sand.Keep small mud pot inside the big mud pot.Place the suitable mud plate over the big mud pot and sealed it with 7 layers of mud pasted cloth.The big mud pot is ignited for 12 hrs.Afterself cooling the seal is

open.The product obtained is again grinded with *Benincasahispida* juice for 3 hrs and dried in moon shade. The end product is powdered, weighed and preserved in an air tight container.

IGNITED CHENDHURAM



END PRODUCT OF CHENDHURAM

DOSAGE: 130mg, twice daily

VEHICLE: Thaen

DURATION: 48 Days

INDICATIONS: Kuttam, Megaranam, Pun puraigal.

4.3. EXTERNAL DRUG: VETTIVER THAILAM

INGREDIENTS:

- Vettiver (Vetiveriazizanioides)
- Athimathuram (Glycyrrhizaglabra)
- Karunseeragam (Nigella sativa)
- Devadharam (Cedrusdeodara)
- Kadukkai (Terminaliachebulae)
- Gingilee oil (Sesamumindicum)
- Water

Vettiver

Devadharam

Athimathuram

Kadukkai

Karunseeragam

Gingilee oil

PROCEDURE[19]:

Water is boiled and vettiver is added to it and made into decoction. All the other ingredients are grinded with decoction and made into paste. Gingilley oil, decoction and the grinded paste are mixed together and heated until it turns into waxy consistency.

ADD WATER

DECOCTION

GINGELLY OIL

MIXED GRINDED RAW DRUGS

VETTIVER THYLAM

INDICATIONS:

Kuttam, Peenisam, Mandaisoolai, Puraneerkovai, Kanpugaichal, Kadhumandham, Ilaippu, Thadhunastam, Irumal, Thegakandhal.

4.4. PRANAYAMAM:

PROCEDURE:

- First, sit relax with closed eyes in such a way that head, neck and spine straight.
- Face smiling and shoulder relaxed.
- Concentrate on your breathing.
- Make Naasimuthirai in right hand and Chin muthirai in left hand.
- Inhale through right nostril, close your right nostril, exhale slowly and completely through left nostril.
- Inhale through left nostril, close your left nostril, exhale slowly and completely through right nostril. This is one round.
- It is recommended 15 rounds for the patients every day in early morning and evening with empty stomach.

STANDARDIZATION OF SPRC:

Standardization of herbal formulation is essential to access the quality of drugs for therapeutic value. Standardization of SPRC based on organoleptic characters, physical characteristics and physicochemical properties.

4.4. STANDARDIZATION PARAMETERS:

4.4.1. TRADITIONAL WAY OF TESTING CHENDHURAM

1. Colour:

Red in colour without any shiny appearance

2. Taste and odour:

Tasteless and odourless

3. Luster

Did not regain luster on heating again at same temperature

4. Floating on water

Sample floats on water. Did not immediately immersed in water

5. Finger furrows test.

Impinged in the papillary ridges when the sample rubbed in between Index finger and thumb

4.4.2. PHYSICOCHEMICAL ANALYSIS:

DETERMINATION OF PH

1% solution of PMC was prepared in distilled water and pH was determined by using pH meter Systronics digital pH meter.

DETERMINATION OF MOISTURE CONTENT

Moisture content was determined by LOD (Loss on Drying) method. 3gm VPM was taken and kept in oven at 105 0c till a constant weight was obtained.

Amount of moisture present in the sample was calculated as referred to the air dried drug.

TOTAL ASH

A weighed amount of the powder was taken in a silica crucible previously ignited, cooled and weighed. It was incinerated using incinerator by gradually increasing the heat not exceeding dull red heat (450°C) until free from carbon, cooled and weighed. The percentage of ash was calculated with reference to air-dried drug.The procedure was repeated to get constant weight.

WATER SOLUBLE ASH

The total ash was boiled with 25 ml water and filtered through ash less filter paper (Whatmann 4.1). It was followed by washing with hot water. The filter paper was dried and ignited in a silica crucible, cooled and the water insoluble ash was weighed. The water-soluble ash was calculated by subtracting the water insoluble ash from the total ash.

ACID INSOLUBLE ASH

The total ash obtained was boiled for 5 minutes with 25 ml of dilute hydrochloric acid (10% w/v) and filter through ash less filter paper (Whatmann No.1). The filter paper was ignited in a silica crucible, cooled and weighed.

DETERMINATION OF ALCOHOL SOLUBLE EXTRACTIVE

The air dried drug was finely grounded, added with 100 ml of ethanol of specified strength in a closed flask for twenty-four hours, shaken frequently during the course of six hours and allowed to stand for eighteen hours. Then the mixture was filtered rapidly taking precautions against loss of solvent, 25 ml of the filtrate was evaporated to dryness in a tarred flat bottomed shallow dish, and dried at 105^{o} to constant weight. The percentage of alcohol-soluble extractive with reference to the air-dried drug was estimated.

4.4.3. HEAVY METAL ANALYSIS

Heavy metal	Procedure	Results
Mercury	1. Add 5ml of hydrochloric acid to little substance, precipitate appears 2. Then boil the precipitate with water. It does not dissolves add sodium hydroxide solution .heat it and fillter	No Black precipitation appears
Lead	1.add 2ml of potassium chormate to salt solution.	No yellow precipitate appears
Arsenic	To 10 drops of solution. Add 6ml NH_3 until neutral.make the solution acidic b adding one or more drops of 6 M HCL. Add 1 ml of thioacetamide and stir well. Heat the test tube in the boiling water bath for 5 minutes	No red orange precipitate Or Yellow or brown precipitates appears
Cadmiam	add 2ml of solution, add 1 ml NaOH, add 1ml of distal water and add 1 ml of Hcl	No Yellow precipitates appears
Chromium	To 10 drops of solution, add 1ml of 3% H_2O_2 then add 6M NaOH dropwise untill the solution is basic. Heat in a boiling water bathh for a few minutes	No yellow solution of CrO_4^{2} form

4.5. TOXICOLOGICAL STUDY

4.5.1. ACUTE ORAL TOXICITY STUDY OF SWARNA PUSHPA RASA CHENDHURAM

(OECD GUIDELINE – 423)

The experimental protocol was permitted by the Institutional Animal Ethical Committee (IAEC) under CPCSEA, approval no: IAEC/XL VIII/28/CLBMCP/2016

Introduction:

- The acute toxic class method is a stepwise procedure with the use of 3 animals of a single sex per step.
- Depending on the mortality and/or the moribund status of the animals, on average 2-4 steps may be necessary to allow judgement on the acute toxicity of the test substance.
- This procedure is reproducible, uses very few animals and is able to rank substances in a similar manner to the other acute toxicity testing methods.
- The acute toxic class method is based on biometric evaluations with fixed doses, adequately separated to enable a substance to be ranked for classification purposes and hazard assessment.
- In principle, the method is not intended to allow the calculation of a precise LD50, but does allow for the determination of defined exposure ranges where lethality is expected since death of a proportion of the animals is still the major endpoint of this test.
- The method allows for the determination of an LD50 value only when at least two doses result in mortality higher than 0% and lower than 100%.
- The use of a selection of pre-defined doses, regardless of test substance, with classification explicitly tied to number of animals observed in different states improves the opportunity for laboratory to laboratory reporting consistency and repeatability.

Principle of the Test:

It is the principle of the test that based on a stepwise procedure with the use of a minimum number of animals per step, sufficient information is obtained on the acute toxicity of the test substance to enable its classification. The substance is administered orally to a group of experimental animals at one of the defined doses. The substance is tested using a stepwise procedure, each step using three animals of a single sex. Absence or presence of compound-related mortality of the animals dosed at one step will determine the next step, i.e.

− no further testing is needed

− dosing of three additional animals, with the same dose

− dosing of three additional animals at the next higher or the next lower dose level. The method will enable a judgment with respect to classifying the test substance to one of a series of toxicity classes.

Methodology:

Selection of Animal Species

The preferred rodent species is the wister rat, although other rodent species may be used. Healthy young adult animals are commonly used laboratory strains should be employed. Females should be nulliparous and non-pregnant. Each animal, at the commencement of its dosing, should be between 6 to 8 weeks old and the weight (150-200gm) should fall in an interval within±20 % of the mean weight of any previously dosed animals.

Housing and Feeding Conditions

The temperature in the experimental animal room should be 22ºC $\pm$ 3ºC. Although the relative humidity should be at least 30% and preferably not exceed 70% other than during room cleaning the aim should be 50-60%. Lighting should be artificial, the sequence being 12 hours light, 12 hours dark. For feeding, conventional laboratory diets may be used with an unlimited supply of drinking water. Animals may be group-caged by dose, but the number of animals per cage must not interfere with clear observations of each animal.

Preparation of animals:

The animals are randomly selected, marked to permit individual identification, and kept in their cages for at least 7 days prior to dosing to allow for acclimatization to the laboratory conditions

Test Animals and Test Conditions:

Sexually mature Female Wistar albino rats (150-200gm) were obtained from TANUVAS, Madhavaram, Chennai. All the animals were kept under standard environmental condition (22±3°C). The animals had free access to water and standard pellet diet (Saimeera foods, Bangalore).

Preparation of animals:

The animals are randomly selected, marked to permit individual identification, and kept in their cages for at least 7 days prior to dosing to allow for acclimatization to the laboratory conditions

Preparation for Acute Toxicity Studies

Rats were deprived of food overnight (but not water 16-18 h) prior to administration of the, ***SWARNA PUSHPA RASA CHENDHURAM***.

The principles of laboratory animal care were followed and the Institutional Animal Ethical Committee approved the use of the animals and the study design

IAEC NUMBER: IAEC/XL VIII/28/CLBMCP/2016

Test Substance	: **SWARNA PUSHPA RASA CHENDHURAM**
Animal Source	: TANUVAS,Madhavaram, Chennai.
Animals	: Wister Albino Rats (Female-3+3)
Age	**:** 6-8 weeks
Body Weight on Day 0	**:** 150-200gm.
Acclimatization	**:** Seven days prior to dosing.
Veterinary examination	**:** Prior and at the end of the acclimatization period.

Identification of animals **:** By cage number, animal number and individual marking by using Picric acid.

Numberofanimals : 3 Female/group,

Routeofadministration : Oral

Diet **:** Pellet feed supplied by Saimeera foods Pvt Ltd, Bangalore

Water **:** Aqua guard portable water in polypropylene bottles.

Housing & Environment **:** The animals were housed in Polypropylene cages provided with bedding of husk.

Housing temperature **:** between 22ºC ±3ºC.

Relative humidity **:** between 30% and 70%,

Air changes **:** 10 to 15 per hour and

Dark and light cycle **:** 12**:**12 hours.

Duration of the study **:** 14 Days

Administration of Doses:

SWARNA PUSHPA RASA CHENDHURAM was suspended in water and administered to the groups of wistar albino rats in a single oral dose by gavage using a feeding needle. The control group received an equal volume of the vehicle. Animals were fasted 12 hours prior to dosing. Following the period of fasting, the animals were weighed and then the test substance was administered. Three Female animals are used for each group. The dose level of 4mg/kg body weight was administered. After the substance has been administered, food was withheld for a further 3-4 hours. The principle of laboratory animal care was followed. Observations were made and recorded systematically and continuously as per the guideline after substance administration. The visual observations included skin changes, mobility, aggressively, sensitivity to sound and pain, as well as respiratory movements. Finally, the number of survivors was noted after 24 hrs and these animals were then monitored for a further 14 days and observations made daily. The toxicological effect was assessed on the basis of mortality.

Observations:

Animals are observed individually after dosing at least once during the first 30 minutes, periodically during the first 24 hours, with special attention given during the

first 4 hours, and daily thereafter, for a total of 14 days, except where they need to be removed from the study and humanely killed for animal welfare reasons or are found dead. It should be determined by the toxic reactions, time of onset and length of recovery period, and may thus be extended when considered necessary. The times at which signs of toxicity appear and disappear are important, especially if there is a tendency for toxic signs to be delayed. All observations are systematically recorded with individual records being maintained for each animal.

Observations include changes in skin and fur, eyes and mucous membranes, and also respiratory, circulatory, autonomic and central nervous systems, and somatomotor activity and behavior pattern. Attention was directed to observations of tremors, convulsions, salivation, diarrhoea, lethargy, sleep and coma. The principles and criteria summarized in the Humane Endpoints Guidance Document taken into consideration. Animals found in a moribund condition and animals showing severe pain or enduring signs of severe distress was humanly killed. When animals are killed for human reasons or found dead, the time of death was recorded.

Acute oral toxicity study of SWARNA PUSHPA RASA CHENDHURAM

Table 1: Dose finding experiment and its behavioral Signs of acute oral Toxicity

Observation done:

SL	Group CONTROL	Observation	Group TEST GROUP	Observation
1	Body weight	Normal	Body weight	Normally increased
2	Assessments of posture	Normal	Assessments of posture	Normal
3	Signs of Convulsion Limb paralysis	Normal	Signs of Convulsion Limb paralysis	Absence of sign (-)
4	Body tone	Normal	Body tone	Normal
5	Lacrimation	Normal	Lacrimation	Absence
6	Salivation	Normal	Salivation	Absence

7	Change in skin color	No significant color change	Change in skin color	No significant color change
8	Piloerection	Normal	Piloerection	Normal
9	Defecation	Normal	Defecation	Normal
10	Sensitivity response	Normal	Sensitivity response	Normal
11	Locomotion	Normal	Locomotion	Normal
12	Muscle gripness	Normal	Muscle gripness	Normal
13	Rearing	Mild	Rearing	Mild
14	Urination	Normal	Urination	Normal

Behaviour:

The animals will be observed closely for behaviour in the first four hours which includes abnormal gait, aggressiveness, exophthalmos, ptosis, akinesia, catalepsy, convolusion, excitation, head twitches, lacrimation, loss of corneal reflex, loss of traction, piloerection reactivity of touch, salivation, scratching, sedation, chewing, head movements, sniffing, straub, tremor and writhes, diarrhea, leathery, sleep and coma.

Body Weight:

Individual weight of animals was determined before the test substance was administered and weights will be recorded at day 1, 7, and 14 of the study. Weight changes were calculated and recorded. At the end of the test, surviving animals were weighed and humanly killed.

Food and water Consumption:

Food and water consumed per animal was calculated for control and the treated dose groups.

Mortality:

Animals were observed for mortality throughout the entire period.

4.5.2. SUB ACUTE TOXICITY

REPEATED DOSE 28-DAY ORAL TOXICITY (407) STUDY OF *SWARNA PUSHPA RASA CHENDHURAM*

Test Substance : **SWARNA PUSHPA RASA CHENDHURAM**
Animal Source : TANUVAS, Madhavaram, Chennai.
Animals : Wister Albino Rats (Male -24, and Female-24)
Age **:** 6-8 weeks
Body Weight **:** 150-200gm.
Acclimatization **:** Seven days prior to dose.
Veterinary examination **:** Prior and at the end of the acclimatization period.
Identification of animals **:** By cage number, animal number and individual marking by using Picric acid
Diet **:** Pellet feed supplied by SaiMeera Foods Pvt Ltd, Bangalore
Water **:** Aqua guard portable water in polypropylene bottles.
Housing & Environment **:** The animals were housed in Polypropylene cages provided with bedding of husk.
Housing temperature **:** between 22ºC±3ºC.
Relative humidity **:** between 30% and 70%,
Air changes **:** 10 to 15 per hour
Dark and light cycle **:** 12**:**12 hours.
Duration of the study **: 28 Days.**

Table 5

Groups	**No of Rats**
Group I Vehicle control (Water)	12(6male,6 female)
Group II SPRCM- low dose X (4mg)	12 (6male,6 female)
Group III SPRCM- Mid dose 5X (20mg)	12 (6male,6female)
Group IV SPRCM- High dose 10X(40mg)	12(6male,6female)

SPRCM -SWARNA PUSHPA RASA CHENDHURAM

Methodology

Randomization, Numbering and Grouping of Animals:

48 Wistar Rats (24M + 24F) were selected and divided into 4 groups. Each group consist of 12 animals (Male -6, and Female-6). First group treated as a control and other three group were treated with test drug (low, mid, high) for 28 days. Animals were allowed acclimatization period of 7 days to laboratory conditions prior to the initiation of treatment. Each animal was marked with picric acid. The females were nulliparous and non-pregnant.

Justification for Dose Selection:

As per OECD guideline three dose levels were selected for the study. They are low dose (X), mid dose (5X), high dose (10X). X is calculated by multiplying the dose 195mg) and the body surface area of the rat (0.018). i.e X dose is (4mg/kg), 5X dose is (20mg/kg), 10X dose is (40mg/kg).

Preparation and Administration of Dose:

SWARNA PUSHPA RASA CHENDHURAM suspended in with water, It was administered to animals at the dose levels of X, 5X, 10X. The test substance suspensions were freshly prepared every two days once for 28 days. The control animals were administered vehicle only. The drug was administered orally by using oral gavage once daily for 28 consecutive days.

Observations:

Experimental animals were kept under observation throughout the course of study for the following:

Body Weight:

Weight of each rat was recorded on day 0, at weekly intervals throughout the course of study.

Food and water Consumption:

Food and water consumed per animal was calculated for control and the treated dose groups.

Clinical signs:

All animals were observed daily for clinical signs. The time of onset, intensity and duration of these symptoms, if any, were recorded.

Mortality:

All animals were observed twice daily for mortality during entire course of study.

Necropsy:

All the animals were sacrificed by excessive anesthesia on day 29. Necropsy of all animals was carried out.

Laboratory Investigations:

Following laboratory investigations were carried out on day 29 in animals fasted over-night. Blood samples were collected from orbital sinus using sodium heparin (200IU/ml) for Bio chemistry and potassium EDTA (1.5 mg/ml) for Hematology as anticoagulant. Blood samples were centrifuged at 3000 r.p.m. for 10 minutes.

Haematological Investigations:

Haematological parameters were determined using Haematology analyzer.

Biochemical Investigations:

Biochemical parameters were determined using auto-analyzer.

Histopathology:

Control and highest dose group animals will be initially subjected to histopathological investigations. If any abnormality found in the highest dose group than the low, then the mid dose group will also be examined. Organs will be collected from all animals and preserved in 10% buffered neutral formalin for 24 h and washed in running water for 24 h. The organ sliced 5 or 6µm sections and were dehydrated in an auto technicon and then cleared in benzene to remove absolute alcohol. Embedding was done by passing the cleared samples through three cups containing molten paraffin at 50°C and then in a cubical block of paraffin made by the “L” moulds. It was followed by microtome and the slides were stained withHaematoxylin-eosin red.

Statistical analysis:

Findings such as body weight changes, water and food consumption, hematology and blood chemistry were subjected to One-way ANOVA followed by dunnet t test using a computer software programme – Graph pad version 7. All data were summarized in tabular form, (Table-6 to 12)

4.6. PHARMACOLOGICAL ACTIVITY

DETERMINATION OF INVITRO ANTI PSORIATIC EFFECT OF EXTRACTS ON CULTURED HACAT CELL LINES

Psoriasis is described as the hyper proliferation and aberrant differentiation of keratinocytes, which leads to inflammation in dermis and epidermis and leukocyte infiltration. Human keratinocytes cell line (HaCaT) is used as an invitro model to evaluate anti-psoriatic activities of test molecules. Anti-psoriatic activities are measured in terms of inhibition of keratinocytes proliferation

HaCaT cell lines was purchased from NCCS Pune were maintained in Dulbecco's modified eagles media (HIMEDIA) supplemented with 10% FBS (Invitrogen) and grown to confluency at 37°c in 5 % CO2 in a humidified atmosphere in a CO2 incubator(NBS, EPPENDORF, GERMANY). The cells were trypsinized (500µl of 0.025% Trypsin in PBS/ 0.5mM EDTA solution (Himedia)) for 2 minutes and passaged to T flasks in complete aseptic conditions. The cells were then grown till 60% confluency followed by activation with 1µl LPS (1µg/ml). LPS stimulated hacat cells were exposed with different concentrations of samples such as.6.25,12.5,25,50,100µg/ml from 1mg/ml stock and incubated for 24 hours s. The % difference in viability was determined by standard MTT assay after 24 hours of incubation.

Cells seeding in 96 well plate:

Two days old confluent monolayer of cells were trypsinized and the cells were suspended in 10% growth medium, 100µl cell suspension ($5x10^4$ cells/well) wasseeded in 96 well tissue culture plate and incubated at 37ºC in a humidified 5% CO_2 incubator.

Preparation of plant extracts and compound stock:

1 mg of each plant extract or compound was added to 1ml of DMEM and dissolved completely by cyclomixer. After that the extract solution was filtered through 0.22 µm Millipore syringe filter to ensure the sterility.

Antipsoriatic Evaluation:

. The cells were then grown till 60% confluency followed by activation with 1µl LPS (1µg/ml),freshly prepared each plant extracts in 5% DMEM were five times serially diluted by two fold dilution (100µg, 50µg, 25µg, 12.5µg, 6.25µg in 100µl of 5% MEM) and each concentration of 100µl were added in triplicates to the respective wells and incubated at 37ºC in a humidified 5% CO_2 incubator.

Antipsoriatic Assay by Direct Microscopic observation:

Entire plate was observed after 24 hours in an inverted phase contrast tissue culture microscope (Olympus CKX41 with Optika Pro5 CCD camera) and microscopic observation were recorded as images. Any detectable changes in the morphology of the cells, such as rounding or shrinking of cells, granulation and vacuolization in the cytoplasm of the cells were considered as indicators of cytotoxicity.

4.7. CLINICAL STUDY

This clinical study was conducted after getting approval from IEC Institutional ethical committee, GSMC, Chennai. IEC NO: This trial was also registered in (CTRI) Clinical Trial Registry of India, CTRI REF NO:. This was done in Post graduate Department of SirappuMaruthuvam, Government Siddha Medical College and Hospital, Arignar Anna hospital campus,Arumbakkam,Chennai-106 under the observation and guidance of Head of the department.

In this clinical study totally 60 cases was enrolled out of which 20 cases were treated with Internal and External drugs. 20 cases were treated with both internal, external drugs & Prananyamam. 20 cases were treated with External drug and Pranayamam.

STUDYDESIGN:

Study Type : An open comparitive clinical trial

Study Place : OPD of Arignar Anna Govt. Hospital of Indian medicine attached with Govt. Siddha Medical College, Arumbakkam, Chennai-106.

Study Period : 12 Months after completion of Pre-clinical studies.

Sample Size : 60 patients (OPD)

20 Patients- Internal, external drugs & Prananyamam.

20 Patients - Internal drug & External drugs.

20 Patients- External drug and Pranayamam

SUBJECT SELECTION:

There is considerable number of patients reporting of OPD of Aringar Anna govt. hospital, GSMC, with the symptom of inclusion criteria will be subjected to screening test and documented using screening proforma.

INCLUSION CRITERIA:

- Age : 18 – 60 years.
- Sex : Both Male and Female
- Patient willing to sign consent form
- Willing to attend OPD for the trial
- Patches with Scaling.
- Auspitz Sign +
- Koebner's Phenomenon +

EXCLUSION CRITERIA

HISTORY OF

- Alcohol
- Narcotic addicts
- Anti –malarial drugs
- Cardiac disease
- Leprosy
- Peptic ulcer

- SLE, Progressive systemic sclerosis
- Evidences of secondary infection in the lesions
- Pregnancy and lactation
- HIV
- Syphilis
- Long term intake of steroids

WITHDRAWAL CRITERIA:

- Intolerance to the drug and development of any serious adverse effect during drug trial.
- Patient turned unwilling to continue in the course of Clinical trial any other systemic illness.

ADR REPORTING:-

- If ADR is reported patients will be referred to SCRI and the matter will be convey to the IEC via member secretary (Peripheral Pharmaco vigilancecentre).

MODERN INVESTIGATION:

Blood:

Hb, TC, DC, ESR,

BloodSugar,(R)

Blood urea.

Renal Function Tests:

Urea,

Creatinine.

Liver Function Tests:

Serum total bilirubin,

Direct bilirubin,

Indirectbilirubin,

Alkalinephosphatase,

SGOT, SGPT.

Urine :

Albumin,

Sugar,

Deposits.

CLINICAL ASSESSMENT

1. Psoriasis area severity index (PASI)

PSORIASIS AREA AND SEVERITY INDEX (PASI)

E – Erythema

D – Desquamation

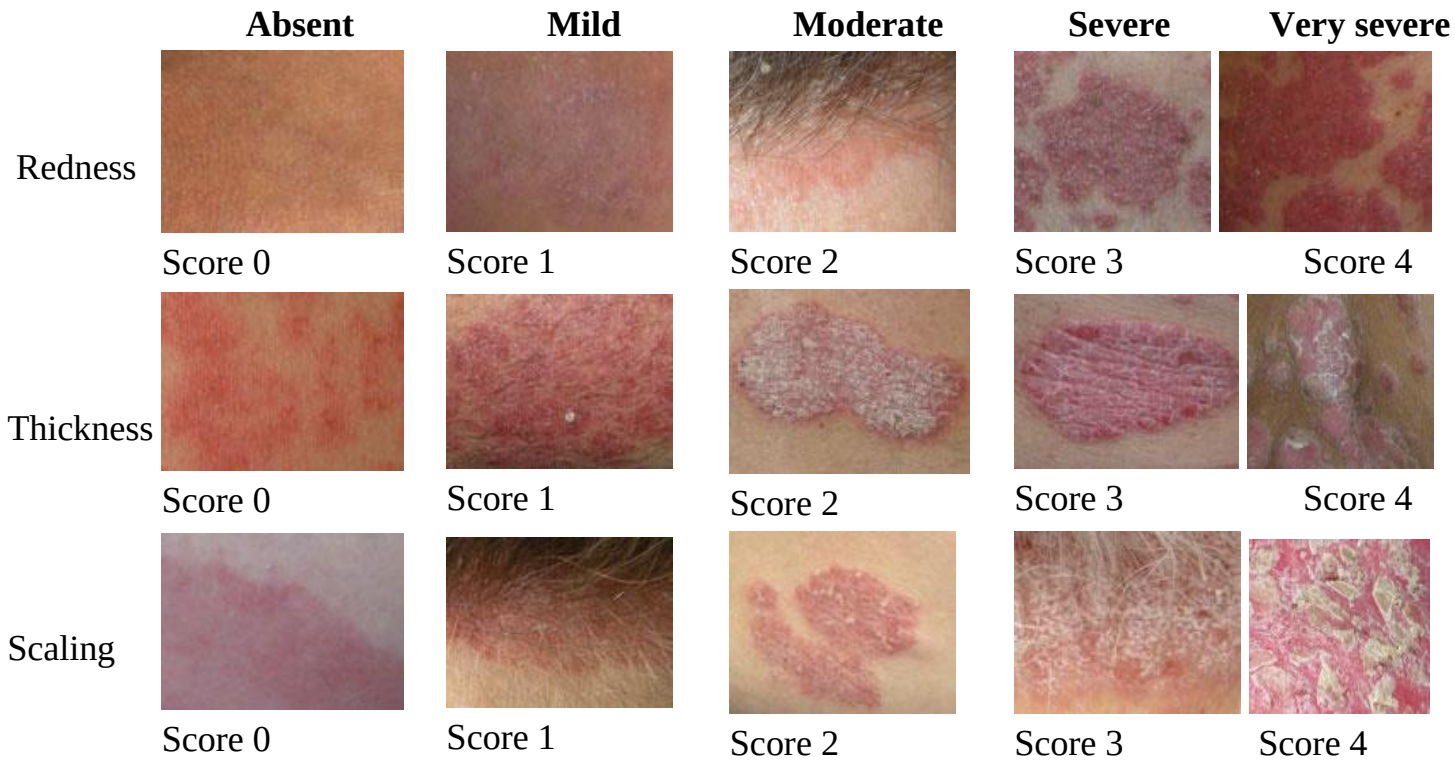
I – Infiltration

A – Area

$PASI=0.1(E_H+I_H+D_H)A_H+0.2(E_U+I_U+D_U)A_U+0.3(E_T+I_T+D_T)A_T+0.4(E_L+I_L+D_L)A_L$

Erythema/ Infiltration/Desquamation scoring	**Area scoring**
0 – Nil	0-Nil
1- Mild	1-Less than 10%
2- Moderate	2- 10%-30%
3-Severe	3-31%-50%
4-Very high	4-51%-70%
	5-71%-90%
	6-91%-100%

PASI SCORE IMAGES:



PSORIASIS ASSESMENT TOOLS:

In this trial Psoriasis area severity index (PASI SCORE[55]) to assess severity of psoriasis.

Mild to Moderate Psoriasis : PASI < 10

Moderate Psoriasis : PASI 10 ≤ 12

Moderate to Severe Psoriasis : PASI 12 ≤ 20

Severe Psoriasis : PASI >20

THE CALCULATIONS OF PSORIASIS AREA SEVERITY INDEX (PASI):

The Psoriasis area severity index (PASI) is an index used to express the severity of Psoriasis. It combines the severity and percentage of affected area

Erythema (Redness) – Symbol (E)

Induration (Thickness) – Symbol (I)

Desqumation (Scaling) – Symbol (D)

Body surface area involvement - Symbol (A)

Over 4 body regions Head (h)

Trunk (t)

Upper limb (u)

Lower limb (l)

The PASI score is calculated by the formula:

$PASI=0.1(E_H+I_H+D_H)\ A_H+0.2(E_U+I_U+D_U)\ A_U+0.3(E_T+I_T+D_T)\ A_T+0.4(E_L+I_L+D_L)A_L$

PASI SCORE CALCULATION

PASI SCORE CALCULATION IN SEVERITY OF BODY REGION

DEGREE OF SEVERITY IN BODY REGION	VALUE
No symptoms	0
Slight	1
Moderate	2
Marked	3
Very marked	4

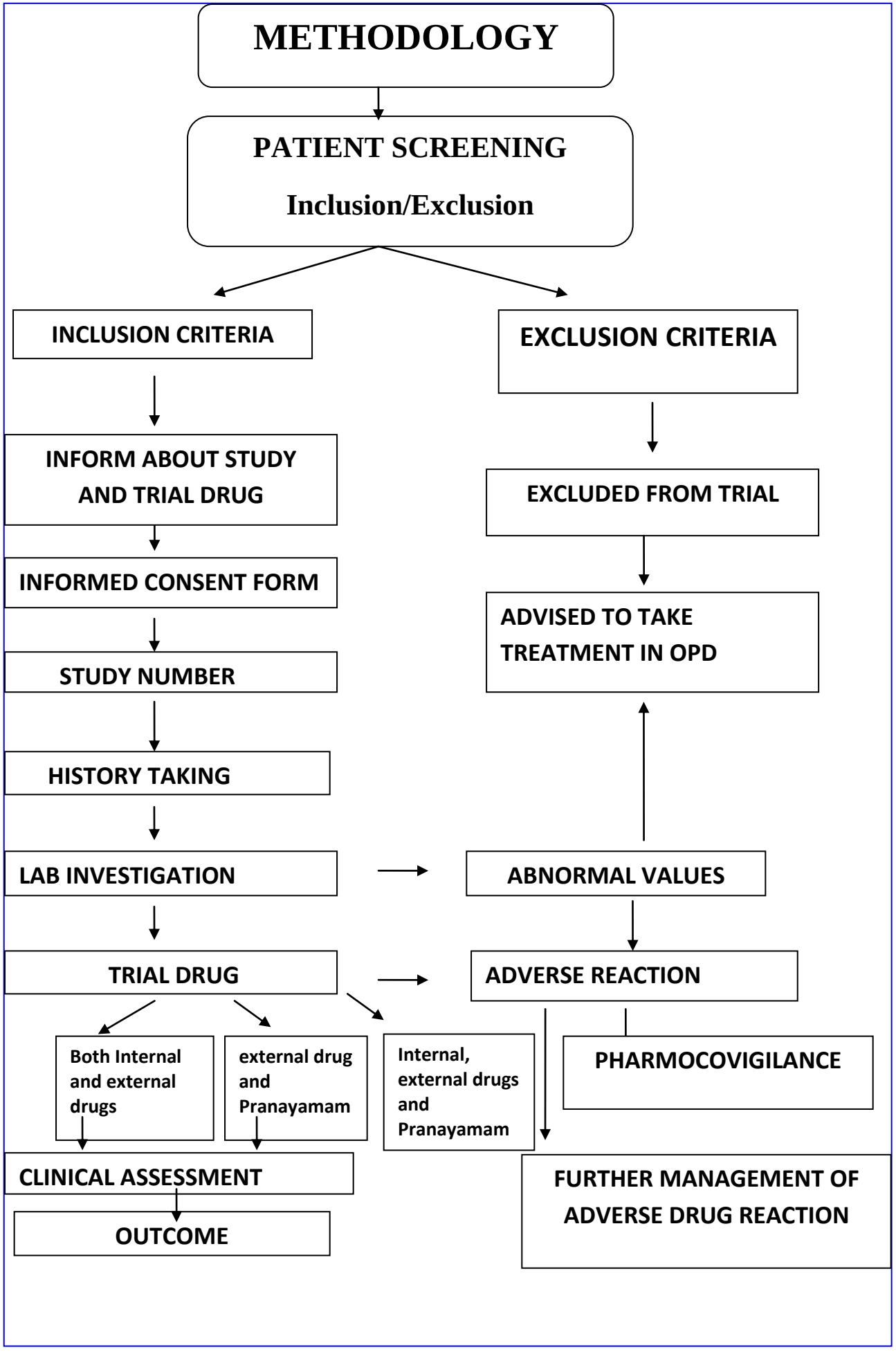
PASI SCORE CALCULATION:

PASI SCORE CALCULATION IN SURFACE AREA INVOLVED IN BODY REGION

SURFACE AREA INVOLVED IN BODY REGION	VALUES
< 10%	**1**
10 – 29%	**2**
30 -49 %	**3**
50 – 69%	**4**
70 – 89%	**5**
90 – 100%	**6**

2. Photo Assessment:

Photos of the patient before and after treatment for the evidence of clinical improvement.


METHODOLOGY
PATIENT SCREENING
Inclusion/Exclusion
INCLUSION CRITERIA
EXCLUSION CRITERIA
INFORM ABOUT STUDY AND TRIAL DRUG
EXCLUDED FROM TRIAL
INFORMED CONSENT FORM
ADVISED TO TAKE TREATMENT IN OPD
STUDY NUMBER
HISTORY TAKING
LAB INVESTIGATION
ABNORMAL VALUES
TRIAL DRUG
ADVERSE REACTION
Both Internal and external drugs
external drug and Pranayamam
Internal, external drugs and Pranayamam
PHARMOCOVIGILANCE
CLINICAL ASSESSMENT
FURTHER MANAGEMENT OF ADVERSE DRUG REACTION
OUTCOME

STUDY ENROLLMENT

In this study Patient reporting at the OPD with symptoms of erythema, itching, plaques, scaling, Auspitz Sign +, Koebner's Phenomenon + are chosen for enrolment based on this inclusion criteria.

The patients who are to be enrolled would be informed (Form IV) about the study, trial drug, possible outcomes and the objectives of the study in the language and terms understandable to them.

After ascertaining the patient's willingness, informed consent would be obtained in writing from them in the consent form (Form IV). All these patients will be given Address, Phone number etc. and also the doctor's phone number, so as to report easily any complications arise.

Complete clinical history, complaints and duration, examination findings-- all would be recorded in the prescribed Proforma in the history and clinical assessment forms separately. Screening Form- I will be filled up: Form –II and Form –III will be used for recording the patients' history, clinical examination of symptoms and signs and laboratory investigations respectively. Patients would be advised to take the trial drug and appropriate dietary advice (Form IV-D) would be given according to the patients' perfect understanding.

CONDUCT OF THE STUDY:

The trial drugs **Swarna Puspha Rasa Chendhurum** (Internal), **Vettiver Thailam (**External**)** and **Pranayamam** are given for 48 days. OP patients should visit the hospital once in 7 days. At each clinical visit clinical assessment is done and prognosis is noted. Sample size is 60 patients. Among 60 patients, 20 Patients are treated with Internal and external drugs. 20 Patients are treated with External drug and Pranayamam. 20 Patients are treated with Internal, external drugs and Pranayamam. The results will be compared at the end of the study. Laboratory investigations are done at 0 day & 48^{th} day of the trial. After the end of the treatment, the patient is advised to visit the OPD for another 2months for follow-up.

DATA COLLECTION FORMS:

Required information will be collected from each patient by using the following forms.

FORM l **:** Screening Proforma

FORM II **:** History taking Proforma

FORM III **:** Clinical Assessment Proforma

FORM IV **:** Laboratory Investigation Proforma

FORM V **:** Informed Consent Form

FORM VI **:** Withdrawal Form

FORM VII **:** Drug compliance form

FORM VIII **:** Patient Information Sheet

FORM IX **:** Diet sheet

DATA MANAGEMENT

After enrolling the patient in the study, a separate file for each patient will be opened and all forms will be kept in the file. Study No. and Patient No. will be entered on the top of file for easy identification. Whenever study patient visits OPD during the study period, the respective patient file will be taken and necessary recordings will be made at the assessment form or other suitable form. The screening forms will be filed separately. The Data recordings will be monitored for completion and adverse event by HOD and Pharmacovigilance committee. All forms will be further scrutinized in presence of Investigators by Sr. Research Officer (Statistics) for logical errors and incompleteness of data to avoid any bias. No modification in the results is permitted for unbiased reports.

OUTCOME:

Primary Outcome:

- Primary outcome is mainly assessed by reduction in clinical symptoms like itching and scaling.
- PASI Score (Psoriasis area severity index)
- To evaluate the prevention of recurrence by follow-up after two months from the start of intervention.
- To evaluate the days of outcome with in the treatment of 48 days.

Secondary Outcome:

- Secondary outcome is assessed by comparing the safety parameters before and after treatment.

ETHICAL ISSUES:

- Informed consent will be obtained from the patients after explaining about the clinical trial in regional tongue.
- After the consent of the patient (through consent form) if they are in the inclusion criteria they will be enrolled in the study.
- Treatment will be provided free of cost.
- Concomitant medications will be given when required.
- Rescue medications will be given when needed.
- The patients who are excluded (as per exclusion criteria) are given proper treatment with full care at OPD.

BLOOD ANALYSIS FOR OPD PATIENTS TREATED WITH

SWARNA PUSHPA RASA CHENDHURAM (INT), **VETTIVER THYLAM** (EXT) & **PRANAYAMAM**

SI. No	OP. NO	AGE/SEX	Hb (gm)		TC (cu.mm)		DC						ESR				Bl sugar R	
							N		L		E		½ hr	1/2 hr	1hr	1hr		
			BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1	1283	49/F	12.6	12.9	9,200	9,150	64	63	30	32	6	5	32	28	65	52	60	63
2	1162	30/F	11.0	10.7	10,350	10,500	55	52	38	41	7	5	44	35	57	49	78	76
3	4228	58/F	13.4	13.2	7,400	8,500	65	61	27	33	8	6	35	33	68	60	104	115
4	5002	44/F	10.2	10.6	8300	8,400	45	44	48	51	7	5	15	12	29	25	104	110
5	5104	39/F	11.2	11.0	10,500	10,280	66	64	28	32	6	4	32	29	59	45	95	107
6	4137	34/F	9.6	9.8	9,100	9,250	57	55	36	40	7	5	17	15	28	24	82	90
7	1994	28/F	10.4	10.3	9,600	9,800	55	54	40	43	5	3	22	19	48	37	98	92
8	8354	43/F	8.0	8.2	7,800	7,900	61	58	35	38	4	4	40	33	69	61	118	125
9	5013	37/F	8.8	8.7	8,700	8,400	53	51	40	44	7	5	25	28	53	56	124	116
10	2912	53/F	10.6	10.2	10,200	10,300	58	64	36	31	6	5	13	17	26	28	74	85
11	9115	43/M	14.6	14.8	8,000	8,050	65	50	35	46	4	4	16	14	25	24	80	91
12	4995	40/M	14.2	14.3	11,000	11,200	67	63	28	34	5	3	23	18	41	37	130	133
13	3365	42/M	15.1	14.8	8,400	8,250	68	63	27	32	5	5	4	10	8	17	67	73
14	3435	26/M	15.0	15.2	5,900	6,000	60	61	34	35	6	4	2	4	6	11	95	105
15	7638	24/M	14.3	14.4	9,600	9,500	64	58	31	39	5	3	14	11	28	24	81	113
16	4986	30/M	12.4	12.4	8,300	8,500	68	62	24	32	8	6	55	51	96	88	123	119
17	5087	49/M	14.4	14.5	6,000	6,150	61	58	30	35	9	7	12	16	24	30	96	110
18	1670	48/M	13.7	13.9	7,600	7,500	58	60	35	36	7	4	23	18	46	39	132	125
19	3133	30/M	15.0	14.9	9,800	9,750	56	62	38	33	6	5	18	12	33	28	117	105
20	7137	37/M	13.8	14.0	10,300	10,450	55	58	41	38	4	4	33	28	57	46	98	119

BLOOD ANALYSIS FOR OPD PATIENTS TREATED WITH

SWARNA PUSHPA RASA CHENDHURAM (INT), **VETTIVER THYLAM** (EXT)

SI. No	OP. NO	AGE/SEX	Hb (gm)		TC (cu.mm)		DC						ESR				Bl sugar	
							N		L		E		½ hr	1/2 hr	1hr	1hr	R	
			BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1	9658	25/M	11.6	11.3	10,300	10,100	66	68	30	28	4	4	6	4	14	12	96	102
2	7894	42/M	12.8	13.0	8,200	8,400	62	60	32	36	6	4	18	16	32	26	120	116
3	5612	36/M	15.3	15.2	9,400	9,300	56	59	38	36	6	5	9	8	15	11	110	98
4	3012	55/M	14.7	14.9	7,600	7,700	52	55	40	40	8	5	22	18	38	27	125	101
5	9632	45/M	13.6	13.7	9,200	9,600	68	62	28	34	4	4	10	12	22	16	99	120
6	5284	56/M	12.4	12.1	8,800	9,000	57	60	35	34	7	6	30	32	55	48	121	88
7	1478	27/M	14.5	14.2	6,200	6,300	63	58	31	37	6	5	28	22	47	38	112	128
8	4563	46/M	11.9	12.0	9,100	9,200	58	63	37	33	5	4	32	28	61	45	129	103
9	2354	52/M	11.4	11.7	10,360	10,400	56	52	37	42	7	6	12	10	26	22	90	99
10	6589	59/M	13.5	13.1	8,300	8,100	69	67	26	29	5	4	15	13	33	24	122	112
11	1452	36/M	14.8	14.7	9,150	9,300	65	63	29	31	6	6	11	9	23	18	101	120
12	6325	41/M	11.6	11.9	6,800	7,000	57	56	37	39	6	5	14	18	36	32	110	98
13	7896	32/M	12.7	12.5	7,200	7,300	70	68	25	28	5	4	30	16	52	48	125	96
14	7852	51/M	14.5	14.3	11,320	11,400	62	56	30	38	8	6	28	23	56	52	99	110
15	2365	28/F	10.7	10.9	9,200	9,300	73	71	21	24	6	5	19	11	44	36	128	112
16	2031	55/F	11.3	11.1	8,100	8,400	55	62	38	32	7	6	36	27	60	52	119	131
17	9630	59/F	10.8	11.0	7,500	7,100	58	57	37	36	5	5	48	31	69	62	124	114
18	7456	25/F	13.5	13.7	9,600	9,800	53	55	39	41	8	4	33	26	54	51	97	104
19	2368	43/F	12.4	12.1	10,200	10,300	63	61	31	34	6	5	23	19	55	47	102	108
20	3148	27/F	11.1	11.4	8,400	8,200	67	58	28	38	5	4	31	24	59	43	130	126

BLOOD ANALYSIS FOR OPD PATIENTS TREATED WITH

VETTIVER THYLAM (EXT) & **PRANAYAMAM**

SI. No	OP. NO	AGE/SEX	Hb (gm)		TC (cu.mm)		DC						ESR				Bl sugar	
							N		L		E		½ hr	1/2 hr	1hr	1hr	R	
			BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1	5086	25/M	15.2	15.3	7,100	7,250	56	61	37	35	7	4	10	8	19	16	114	98
2	5268	45/M	14.3	14.0	8,800	9,000	74	70	20	26	6	4	18	16	32	34	186	160
3	9920	42/M	16.0	16.1	6,600	6,900	55	60	37	35	8	5	6	8	15	13	126	130
4	4570	57/M	13.3	13.6	9,600	9,150	72	68	23	29	5	3	12	10	24	27	163	117
5	5460	49/M	10.8	11.0	11,400	11,300	63	65	32	30	5	5	20	22	37	34	90	95
6	5171	45/M	12.3	12.5	7,300	7,600	52	58	42	38	6	4	35	37	59	44	156	137
7	7369	31/M	14.7	14.8	8,100	8,300	58	48	37	49	5	3	61	55	96	88	110	140
8	3107	42/M	15.9	16.0	10,200	10,450	61	65	34	31	5	4	6	8	15	12	106	98
9	3109	59/M	15.1	15.3	7,200	7,500	65	60	29	35	6	5	18	14	40	32	95	110
10	2798	18/M	10.6	10.7	11,200	11,050	69	65	26	30	5	5	24	18	50	41	123	131
11	1392	39/F	11.3	11.4	9,560	9,500	53	57	40	37	7	6	35	27	58	48	148	120
12	2102	40/F	14.3	14.5	8,350	8,200	64	67	33	30	3	3	45	32	65	56	98	88
13	769	38/F	12.3	12.5	7,550	7,370	55	52	37	44	8	4	62	43	94	72	106	122
14	2580	50/F	11.8	12.0	10,300	10,450	57	62	37	33	6	5	25	17	55	38	99	105
15	6566	22/F	12.3	12.5	7,360	7,300	56	69	37	25	7	6	12	10	34	28	110	101
16	5931	36/F	11.9	11.8	8,310	8,500	51	58	44	38	5	4	27	23	43	37	123	120
17	3124	50/F	13.5	13.4	9,630	9,100	62	60	33	36	5	4	32	28	64	42	99	110
18	5469	33/F	11.5	11.3	11,850	11,200	76	54	18	40	6	6	16	14	38	32	138	125
19	5224	45/F	12.8	12.6	9,300	9,500	68	56	24	40	8	4	28	25	49	37	98	105
20	3001	38/F	11.6	11.5	10,520	10,200	70	61	23	30	7	9	47	38	72	64	95	125

URINE ANALYSIS FOR OPD PATIENTS TREATED WITH **SWARNA PUSHPA RASA CHENDHURAM** (INT) &**VETTIVER THYLAM** (EXT)

S.NO	OP.NO	AGE/SEX	URINE ANALYSIS BEFORE TREATMENT				URINE ANALYSIS AFTER TREATMENT			
			ALBUMIN	SUGAR	DEPOSITS		ALBUMIN	SUGAR	DEPOSITS	
					PUS CELLS	EPITHELIAL CELLS			PUS CELLS	EPITHELIAL CELLS
1	9658	25/M	NIL	NIL	NIL	2-3	NIL	NIL	NIL	NIL
2	7894	42/M	NIL	NIL	NIL	2-3	NIL	NIL	0-1	2-6
3	5612	36/M	NIL	NIL	1-2	NIL	NIL	NIL	1-2	2-5
4	3012	55/M	NIL	NIL	NIL	1-3	NIL	NIL	2-5	1-2
5	9632	45/M	NIL	NIL	1-3	NIL	NIL	NIL	1-3	2-3
6	5284	56/M	NIL	NIL	0-1	0-2	NIL	NIL	NIL	NIL
7	1478	27/M	NIL	NIL	NIL	4-6	NIL	NIL	2-4	0-1
8	4563	46/M	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
9	2354	52/M	NIL	NIL	NIL	4-5	NIL	NIL	2-3	4-5
10	6589	59/M	NIL	NIL	0-4	NIL	NIL	NIL	1-3	NIL
11	1452	36/M	NIL	NIL	NIL	3-4	NIL	NIL	1-4	NIL
12	6325	41/M	NIL	NIL	NIL	NIL	NIL	NIL	0-3	NIL
13	7896	32/M	NIL	NIL	0-1	1-2	NIL	NIL	0-2	NIL
14	7852	51/M	NIL	NIL	2-3	NIL	NIL	NIL	NIL	NIL
15	2365	63/F	NIL	NIL	NIL	NIL	NIL	NIL	NIL	1-2
16	2031	55/F	NIL	NIL	1-3	1-2	NIL	NIL	2-3	1-2
17	9630	59/F	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
18	7456	25/F	NIL	NIL	NIL	NIL	NIL	NIL	3-5	6-7
19	2368	43/F	NIL	NIL	NIL	2-5	NIL	NIL	0-1	1-2
20	3148	27/F	NIL	NIL	NIL	NIL	NIL	NIL	3-5	3-4

URINE ANALYSIS FOR OPD PATIENTS TREATED WITH **SWARNA PUSHPA RASA CHENDHURAM** (INT), **VETTIVER THYLAM** (EXT) & **PRANAYAMAM**

S.NO	OP.NO	AGE/SEX	URINE ANALYSIS BEFORE TREATMENT				URINE ANALYSIS AFTER TREATMENT			
			ALBUMIN	SUGAR	DEPOSITS		ALBUMIN	SUGAR	DEPOSITS	
					PUS CELLS	EPITHELIAL CELLS			PUS CELLS	EPITHELIAL CELLS
1.	1283	49/F	NIL	NIL	NIL	0-3	NIL	NIL	2-3	3-5
2.	1162	30/F	NIL	NIL	2-3	NIL	NIL	NIL	2-3	NIL
3.	4228	58/F	NIL	NIL	1-2	1-3	NIL	NIL	NIL	2-3
4.	5002	44/F	NIL	NIL	2-4	NIL	NIL	NIL	2-3	NIL
5.	5104	39/F	NIL	NIL	2-3	1-3	NIL	NIL	NIL	1-3
6.	4137	34/F	NIL	NIL	NIL	0-1	NIL	NIL	1-2	NIL
7.	1994	28/F	NIL	NIL	2-5	NIL	NIL	NIL	4-6	NIL
8.	8354	43/F	NIL	NIL	NIL	3-5	NIL	NIL	NIL	NIL
9.	5013	37/F	NIL	NIL	1-3	NIL	NIL	NIL	3-5	NIL
10.	2912	53/F	NIL	NIL	1-4	0-4	NIL	NIL	NIL	0-4
11.	9115	43/M	NIL	NIL	2-4	NIL	NIL	NIL	3-4	NIL
12	4995	40/M	NIL	NIL	1-3	2-4	NIL	NIL	NIL	NIL
13	3365	42/M	NIL	NIL	0-2	0-1	NIL	NIL	1-2	0-1
14	3435	26/M	NIL	NIL	NIL	2-3	NIL	NIL	NIL	2-3
15	7638	24/M	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
16	4986	30/M	NIL	NIL	2-3	1-3	NIL	NIL	1-2	1-3
17	5087	49/M	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
18	1670	48/M	NIL	NIL	3-5	NIL	NIL	NIL	4-6	3-4
19	3133	30/M	NIL	NIL	0-1	NIL	NIL	NIL	2-5	2-3
20	7137	37/M	NIL	NIL	3-4	NIL	NIL	NIL	1-3	3-5

URINE ANALYSIS FOR OPD PATIENTS TREATED WITH **VETTIVER THYLAM** (EXT) & **PRANAYAMAM**

S.NO	OP.NO	AGE/SEX	URINE ANALYSIS BEFORE TREATMENT				URINE ANALYSIS AFTER TREATMENT			
			ALBUMIN	SUGAR	DEPOSITS		ALBUMIN	SUGAR	DEPOSITS	
					PUS CELLS	EPITHELIAL CELLS			PUS CELLS	EPITHELIAL CELLS
1	5086	25/M	NIL	NIL	2-4	NIL	NIL	NIL	2-3	3-4
2	5268	45/M	NIL	NIL	1-3	2-4	NIL	NIL	2-3	1-4
3	9920	42/M	NIL	NIL	0-2	0-1	NIL	NIL	NIL	0-3
4	4570	57/M	NIL	NIL	NIL	2-3	NIL	NIL	2-3	NIL
5	5460	49/M	NIL	NIL	NIL	NIL	NIL	NIL	NIL	1-3
6	5171	45/M	NIL	NIL	2-3	1-3	NIL	NIL	1-2	NIL
7	7369	31/M	NIL	NIL	NIL	NIL	NIL	NIL	0-2	4-5
8	3107	42/M	NIL	NIL	3-5	NIL	NIL	NIL	NIL	NIL
9	3109	59/M	NIL	NIL	0-1	NIL	NIL	NIL	3-4	NIL
10	2798	18/M	NIL	NIL	3-4	NIL	NIL	NIL	NIL	2-4
11	1392	39/F	NIL	NIL	2-3	3-5	NIL	NIL	NIL	1-3
12	2102	40/F	NIL	NIL	2-3	NIL	NIL	NIL	2-3	NIL
13	769	38/F	NIL	NIL	NIL	2-3	NIL	NIL	1-2	1-3
14	2580	50/F	NIL	NIL	2-3	NIL	NIL	NIL	2-4	NIL
15	6566	22/F	NIL	NIL	NIL	1-3	NIL	NIL	2-3	1-3
16	5931	36/F	NIL	NIL	1-2	NIL	NIL	NIL	NIL	0-1
17	3124	50/F	NIL	NIL	4-6	NIL	NIL	NIL	2-5	NIL
18	5469	33/F	NIL	NIL	NIL	NIL	NIL	NIL	NIL	3-5
19	5224	45/F	NIL	NIL	3-5	NIL	NIL	NIL	1-3	NIL
20	3001	56/F	NIL	NIL	NIL	0-4	NIL	NIL	0-3	1-4

LIVER FUNTION TEST FOR OPD PATIENTS TREATED WITH

SWARNAPUSHPA RASA CHENDHURAM (INT), **VETTIVER THYLAM** (EXT) &**PRANAYAMAM**

S.NO	OP.NO	AGE/SEX	LIVER FUNCTION TEST – BEFORE TREATMENT						LIVER FUNCTION TEST – AFTER TREATMENT					
			TOTAL BILURUBIN	DIRECT BILURUBIN	INDIRECT BILURUBIN	SGOT	SGPT	SERUM ALKALINE PHOSPHATASE	TOTAL BILURUBIN	DIRECT BILURUBIN	INDIRECT BILURUBIN	SGOT	SGPT	SERUM ALKALINE PHOSPHATASE
1.	1283	49/F	0.56	0.32	0.23	46	52	78	0.61	0.16	0.56	45.3	46.3	85
2.	1162	30/F	0.55	0.03	0.44	28.2	45.1	71	0.43	0.23	0.21	29.2	47	66
3.	4228	58/F	0.81	0.42	0.36	21	12	96	0.74	0.44	0.36	14	16	75
4.	5002	44/F	0.63	0.39	0.32	34	13	82	0.59	0.32	0.25	36	9	76
5.	5104	39/F	0.74	0.31	0.31	46	24	78	0.64	0.36	0.38	38	29	73
6.	4137	34/F	0.7	0.41	0.24	35	26	101	0.6	0.2	0.4	13	16	96
7.	1994	28/F	0.61	0.33	0.39	41	14	104	0.52	0.37	0.29	33	29	82
8.	8354	43/F	0.52	0.11	0.47	18.1	16.2	83	0.56	0.06	0.44	12	16	71
9.	5013	37/F	0.9	0.2	0.7	18	23	96	0.8	0.24	0.64	13	22	111
10.	2912	53/F	0.8	0.4	0.4	17	18	128	0.7	0.2	0.5	10	15	105
11.	9115	43/M	0.86	0.19	0.66	21.4	17.6	525	0.7	0.6	0.3	21.1	16.8	46
12	4995	40/M	0.4	0.1	0.3	20	14	69	0.5	0.1	0.1	18	24	75
13	3365	42/M	0.97	0.54	0.35	43	24	94	0.3	0.3	0.3	25	23	93
14	3435	26/M	0.75	0.52	0.23	35	28	86	0.61	0.12	0.50	20	19.2	71
15	7638	24/M	0.59	0.39	0.27	28	19	74	0.49	0.24	0.22	36	12	76
16	4986	30/M	0.61	0.31	0.35	37	14	95	0.58	0.36	0.23	23	23	89
17	5087	49/M	0.6	0.4	0.2	12	18	57	0.8	0.5	0.3	18	19	65
18	1670	48/M	0.73	0.41	0.37	46	31	72	0.54	0.39	0.24	44	27	51
19	3133	30/M	0.72	0.43	0.29	35	12	56	0.68	0.44	0.29	26	11	85
20	7137	37/M	0.9	0.4	0.5	16.1	18.5	49.1	0.7	0.33	0.38	13	16.2	50.3

LIVER FUNTION TEST FOR OPD PATIENTS TREATED WITH

SWARNAPUSHPA RASA CHENDHURAM (INT), **VETTIVER THYLAM** (EXT)

S.NO	OP.NO	AGE/SEX	LIVER FUNCTION TEST – BEFORE TREATMENT						LIVER FUNCTION TEST – AFTER TREATMENT					
			TOTAL BILURUBIN	DIRECT BILURUBIN	INDIRECT BILURUBIN	SGOT	SGPT	SERUM ALKALINE PHOSPHATASE	TOTAL BILURUBIN	DIRECT BILURUBIN	INDIRECT BILURUBIN	SGOT	SGPT	SERUM ALKALINE PHOSPHATASE
1.	9658	25/M	0.2	0.32	0.17	21	20	51	0.4	0.2	0.2	19	31.5	56
2.	7894	42/M	0.96	0.24	0.68	43.8	29.7	86	0.8	0.59	0.22	42	29.6	81
3.	5612	36/M	0.94	0.59	0.49	22	21	51	0.57	0.01	0.49	19	17	56
4.	3012	55/M	0.4	0.3	0.1	28	17	45	2.41	1.23	1.11	20	15	32
5.	9632	45/M	0.92	0.23	0.64	25.4	26	75	0.4	0.3	0.1	22.3	19.3	80
6.	5284	56/M	0.55	0.04	0.46	28.9	54.6	54	0.57	0.04	0.51	25.2	39.2	39.3
7.	1478	27/M	0.46	0.24	0.2	22.9	19	56	0.4	0.2	0.2	20.1	15	59
8.	4563	46/M	0.62	0.35	0.34	17.9	15	48	0.70	0.44	0.31	16.8	12	41
9.	2354	52/M	1.69	0.93	0.63	20	22	98	0.68	0.11	0.56	17	18.8	88
10.	6589	59/M	0.31	0.08	0.30	19.4	6.9	90	0.33	0.01	0.29	15.9	6.2	88
11.	1452	36/M	0.79	0.51	0.20	34	16	59	0.58	0.46	0.34	25	18	49
12	6325	41/M	0.55	0.36	0.26	19	16	31	0.43	0.22	0.25	11	12	41
13	7896	32/M	0.64	0.31	0.30	29	19	55	0.58	0.35	0.23	22	13	59
14	7852	51/M	2.49	1.25	1.17	20	12	211	1.60	0.95	0.64	21	34	114
15	2365	63/F	0.4	0.1	0.3	30	45	162	0.5	0.3	0.2	15	26	88
16	2031	55/F	0.41	0.04	0.39	18.4	17.5	63	0.4	0.3	0.1	20	10.1	58
17	9630	59/F	0.40	0.2	0.2	29.3	15	55	0.5	0.3	0.2	18.9	11	45
18	7456	25/F	0.73	0.39	0.34	32	19	54	0.68	0.35	0.31	26	12	54
19	2368	43/F	0.57	0.34	0.21	33	23	62	0.49	0.34	0.14	32	23	41
20	3148	27/F	0.61	0.33	0.30	40	40	61	0.55	0.35	0.23	34	34	56

RENAL FUNCTION TEST FOR OPD PATIENTS TREATED WITH

SWARNA PUSHPA RASA CHENDHURAM (INT),

VETTIVER THYLAM (EXT)

S.NO	OP.NO	AGE/SEX	RENAL FUNCTION TEST			
			BEFORE TREATMANT		AFTER TREATMANT	
			UREA	CREATININE	UREA	CREATININE
1	9658	25/M	18	0.6	21	0.5
2	7894	42/M	20	0.5	22	0.4
3	5612	36/M	16	0.7	20	0.7
4	3012	55/M	24	0.4	20	0.5
5	9632	45/M	22	0.6	18	0.6
6	5284	56/M	20	0.6	23	0.5
7	1478	27/M	18	0.4	21	0.3
8	4563	46/M	24	0.7	24	0.6
9	2354	52/M	25	0.4	22	0.5
10	6589	59/M	18	0.5	20	0.6
11	1452	36/M	20	0.6	18	0.4
12	6325	41/M	19	0.5	23	0.7
13	7896	32/M	15	0.3	20	0.5
14	7852	51/M	21	0.7	15	0.6
15	2365	63/F	14	0.4	14	0.3
16	2031	55/F	20	0.4	22	0.6
17	9630	59/F	23	0.5	25	0.4
18	7456	25/F	19	0.7	23	0.7
19	2368	43/F	22	0.5	20	0.4
20	3148	27/F	18	0.4	16	0.4

RENAL FUNCTION TEST FOR OPD PATIENTS TREATED WITH **SWARNA PUSHPA RASA CHENDHURAM** (INT), **VETTIVER THYLAM** (EXT) & **PRANAYAMAN**

S.NO	OP.NO	AGE/SEX	RENAL FUNCTION TEST			
			BEFORE TREATMANT		AFTER TREATMANT	
			UREA	CREATININE	UREA	CREATININE
1.	1283	49/F	18	0.6	18	0.5
2.	1162	30/F	24	0.4	23	0.4
3.	4228	58/F	20	0.4	22	0.6
4.	5002	44/F	30	0.7	28	0.5
5.	5104	39/F	22	0.5	18	0.4
6.	4137	34/F	24	0.6	20	0.7
7.	1994	28/F	18	0.5	18	0.6
8.	8354	43/F	20	0.4	24	0.5
9.	5013	37/F	24	0.5	20	0.6
10.	2912	53/F	18	0.4	16	0.4
11.	9115	43/M	22	0.6	25	0.7
12	4995	40/M	23	0.2	20	0.4
13	3365	42/M	24	0.5	24	0.5
14	3435	26/M	15	0.4	18	0.6
15	7638	24/M	26	0.6	20	0.7
16	4986	30/M	24	0.6	21	0.4
17	5087	49/M	18	0.5	22	0.4
18	1670	48/M	16	0.4	20	0.5
19	3133	30/M	18	0.6	16	0.7
20	7137	37/M	21	0.5	23	0.4

STATISTICAL ANALYSIS

CLINICAL PROGNOSIS

Clinical Features for OPD Patients Treated with Swarna Pushpa Rasa Chendhuram (Int), VettiverThylam (Ext) & Pranayaman.

The most popular non parametric statistical tool, namely, McNemar Test analysis has been employed to analyses the effectiveness with the help of a hypothesis.

S. No	Clinical features	Before Treatment	After Treatment
		n%	n%
1.	Erythematous patcheswithwhitesil Very scales	60(100)	4(6.5)**
2.	Itching	45(75)	0(0)**
3.	Scalp lesions	18(30)	0(0)**
4.	Auspitz sign	52(86.5)	2(3.5)**
5.	Candlegrease sign	14(23.5)	0(0)**
6.	Kobner's phenomenon	25(41.6)	3(5)**
7.	Nail changes	8(13.5)	3(5)*
8.	Palm and sole lesions	21(35)	0(0)**
9.	Joint involvement.	5(8.5)	1(2.5)*

McNemat test, C.I: 95%, *P<0.05; **P<0.01

Software: spss17 version

Number of cases: 40

Inference:

Since the p value is significant in all clinical features. So there is significant reducing of clinical features among the patients for the treatment of Thadippu Perunoi (Psoriasis).Hence it is concluded that the treatment was effective and **significant.**

LIVER FUNTION TEST FOR OPD PATIENTS TREATED WITH **SWARNAPUSHPA RASA CHENDHURAM** (INT), **VETTIVER THYLAM** (EXT) & **PRANAYAMAM**

S.No.	Investigations	Before Treatment Mean±SD n= 20	After Treatment Mean±SD n= 20	P value
1	Total bilirubin	0.69±0.15	0.60±0.12	**<0.05**
2	SGPT	21.97±10.64	21.82±10.17	**0.919**
3	SGOT	29.89±11.31	24.38±11.11	**<0.05**
4	Alkaline Phosphatase	81.70±18.97	77.06±17.11	**0.146**

C.I: 95%; Paired samples t test. Where p<0.001, p<0.05 representsstatistically significant.

S.No.	Investigations	Before Treatment Mean±SD n= 20	After Treatment Mean±SD n= 20	P value
1	Total bilirubin	0.73±0.52	0.67±0.48	**0.684**
2	SGPT	22.68±11.60	19.83±9.47	**0.149**
3	SGOT	26.70±7.39	22.11±7.17	**<0.001**
4	Alkaline Phosphatase	73.35±42.55	61.26±21.53	**0.056**

C.I: 95%; Paired samples t test. Where p<0.001, p<0.05 representsstatistically significant.

BLOOD ANALYSIS FOR OPD PATIENTS TREATED WITH **SWARNA PUSHPA RASA CHENDHURAM** (INT), **VETTIVER THYLAM** (EXT).

S.No.	Investigations	Before Treatment Mean±SD n= 20	After Treatment Mean±SD n= 20	P value
1	Urea	19.80±2.98	20.35±2.94	**0.457**
2	Creatinine	0.52±0.12	0.51±0.12	**0.716**

C.I: 95%; Paired samples t test. Where p<0.001, p<0.05 representsstatistically significant.

BLOOD ANALYSIS FOR OPD PATIENTS TREATED WITH **SWARNA PUSHPA RASA CHENDHURAM** (INT), **VETTIVER THYLAM** (EXT) &**PRANAYAMAN.**

S.No.	**Investigations**	**Before Treatment Mean±SD n= 20**	**After Treatment Mean±SD n= 20**	**P value**
1	Urea	21.25±3.72	20.80±3.10	**0.527**
2	Creatinine	0.49±0.11	0.52±0.11	**0.301**

C.I: 95%; Paired samples t test. Where $p<0.001$, $p<0.05$ representsstatistically significant.

PASI SCORE FOR OPD PATIENTS TREATED WITH **SWARNA PUSHPA RASA CHENDHURAM** (INT), **VETTIVER THYLAM** (EXT) & **PRANAYAMAN.**

S.No.	BT PASI Score	AT PASI Score
1	16.2	4.0
2	31.8	4.6
3	19.4	4.1
4	4.8	1.0
5	22.8	6.8
6	4.8	0
7	32.8	8.2
8	27.2	0
9	30.9	3.4
10	2.7	0.6
11	42.4	4.8
12	22.6	5.7
13	27.3	2
14	12	13.4
15	14.4	0
16	20.2	7.4
17	41.6	4.4
18	4.8	0
19	14	1.8
20	21.3	0

Software: spss17 version

Variables:PASI Score – before treatment, after treatment

Number of cases: 20

Test: Paired t test

Confidence Interval: 95%

Correlation coefficient (r): 0.30

Before and after treatment mean difference: 17.09 ± 11.24.

P Value (2 tailed): $p<0.001$.

Inference:

Since the P value is highly significant (<0.001). So there is significant reducing of PASI Score among the patients for the treatment of Thadippu Perunoi (Psoriasis).Hence it is concluded that the treatment was effective **and significant.**

PASI SCORE FOR OPD PATIENTS TREATED WITH

SWARNA PUSHPA RASA CHENDHURAM (INT),

VETTIVER THYLAM (EXT).

S.No.	BT PASI Score	AT PASI Score
1	14.4	0
2	21.6	5.2
3	60	10.8
4	15.6	0
5	13.6	5.4
6	21	0
7	11.8	0.8
8	11.8	3.2
9	60	6.4
10	57	7.0
11	21.1	0.6
12	23.5	4.6
13	10.8	0
14	23.2	4.8
15	24.6	0
16	8.8	2.8
17	21.3	0
18	14.4	8
19	16.4	2.2
20	18.8	4.8

Software: spss17 version

Variables: PASI Score – before treatment, after treatment

Number of cases: 20

Test: Paired t test

Confidence Interval: 95%

Correlation coefficient (r): 0.61

Before and after treatment mean difference: 20.15 ± 14.24.

P Value (2 tailed): $p<0.001$.

Inference:

Since the P value is highly significant (<0.001). So there is significant reducing of PASI Score among the patients for the treatment of Thadippu Perunoi (Psoriasis).Hence it is concluded that the treatment was effective **and significant.**

PASI SCORE FOR OPD PATIENTS TREATED WITH

VETTIVER THYLAM (EXT) & **PRANAYAMAM**

S.No.	BT PASI Score	AT PASI Score
1	14.4	8
2	16.4	2.2
3	18.8	4.8
4	16.2	4.0
5	31.8	4.6
6	19.4	4.1
7	4.8	1.0
8	22.8	6.8
9	60	10.8
10	15.6	0
11	13.6	5.4
12	57	7.0
13	21.1	0.6
14	23.5	4.6
15	10.8	0
16	23.2	4.8
17	21.3	0
18	42.4	4.8
19	22.6	5.7
20	18.8	4.8

Software: spss17 version

Variables: PASI Score – before treatment, after treatment

Number of cases: 20

Test: Paired t test

Confidence Interval: 95%

Correlation coefficient (r): 0.611

Before and after treatment mean difference: 19.52 ± 12.60.

P Value (2 tailed): $p<0.001$.

Inference:

Since the P value is highly significant (<0.001). So there is significant reducing of PASI Score among the patients for the treatment of Thadippu Perunoi (Psoriasis).Hence it is concluded that the treatment was effective **and significant.**

5. RESULTS AND OBSERVATION

SPRC – ORGANOLEPTIC CHARACTER

S.NO	CHARACTERS	RESULTS
1	COLOUR	Brick red
2	TASTE	Tasteless
3	ODOUR	Odourless
4	APPERENCE	Fine powder
5	SOLUBILITY	Soluble in water and alcohol

COLOUR OF THE INGREDIENT BEFORE & AFTER PURIFICATION

S. NO	INGREDIENTS	BEFORE PURIFICATION	AFTER PURIFICATION
1	Rasam	Colourless, dust float over it	Colourless
2	Gandhagam	Yellow solid	yellow granules
3	Velvangam	Sliver solid	Sliver
4	Navacharam	Greenish	Greenish

TRADITIONALTESTING METHOD FOR CHENDHURAM

S. NO	TESTS	INFERENCE
1	Floating of water	+
2	Finger furrows test	+
3	Lusterless	+
4	Tasteless	+
5	Colour	Brick red

OBSERVATION

Hence it proves the traditional way to testing.

PHYSICO-CHEMICAL ANALYSIS

PHYSICO-CHEMICAL ANALYSIS RESULTS FOR SPRC

S.NO	PARAMETERS	MEAN RESULTS
1	Loss on drying at 105^0C	7.32%
2	Total ash	88.29%
3	Water soluble ash	30.73%
4	Acid soluble ash	50.75%
5	P^H	3.91

HEAVY METAL ANALYSIS

S.NO	HEAVY METALS	RESULTS
1	Mercury	No detectable
2	Lead	No detectable
3	Arsenic	No detectable
4	Cadmium	No detectable
5	Chromium	No detectable

OBSERVATION :

Hg ,Pb, As, Cd, Chromium is No detectable limit. Hence it proves the drug is safe for Internal Administration.

Acute oral toxicity study of SWARNA PUSHPA RASA CHENDHURAM

Dose finding experiment and its behavioral Signs of acute oral Toxicity

Observation done:

SL	Group CONTROL	Observation	Group TEST GROUP	Observation
1	Body weight	Normal	Body weight	Normally increased
2	Assessments of posture	Normal	Assessments of posture	Normal
3	Signs of Convulsion Limb paralysis	Normal	Signs of Convulsion Limb paralysis	Absence of sign (-)
4	Body tone	Normal	Body tone	Normal
5	Lacrimation	Normal	Lacrimation	Absence
6	Salivation	Normal	Salivation	Absence
7	Change in skin color	No significant color change	Change in skin color	No significant color change
8	Piloerection	Normal	Piloerection	Normal
9	Defecation	Normal	Defecation	Normal
10	Sensitivity response	Normal	Sensitivity response	Normal
11	Locomotion	Normal	Locomotion	Normal
12	Muscle gripness	Normal	Muscle gripness	Normal
13	Rearing	Mild	Rearing	Mild
14	Urination	Normal	Urination	Normal

Results:

All data were summarized in tabular form, (Table-1-4) showing for each test group the number of animals used, the number of animals displaying signs of toxicity, the number of animals found dead during the test, description of toxic symptoms, weight changes, food and water intakeNo of animals in each group:3

(Observational study Results)

No	Dose mg/kg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	Control	+	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	4mg	+	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-

1..Alertness 2. Aggressiveness 3. Pile erection 4. Grooming 5. Gripping 6. Touch Response 7. Decreased Motor Activity 8.Tremors 9.Convulsions 10. Muscle Spasm 11. Catatonia 12. Muscle relaxant 13. Hypnosis 14.Analgesia 15.Lacrimation 16.Exophthalmos 17.Diarrhea 18.Writhing 19.Respiration 20.Mortality.

(+ Present, - Absent)

(Body weight Observation)

DOSE	DAYS		
	1	7	14
CONTROL	270.1±65.70	270.7± 09.71	270.6 ±2.10
HIGH DOSE	260.3± 4.44	260.4 ±7.12	260.2 ± 6.05
P value (p)*	NS	NS	NS

(Water intake (ml/day) of Wistar albino rats group exposed to *SWARNA PUSHPA RASA CHENDHURAM):*

DOSE	DAYS		
	1	6	14
CONTROL	60 ± 1.62	60±1.10	60.1±1.04
HIGH DOSE	59.5±1.04	59.5±2.07	59.8±2.04
P value (p)*	NS	NS	NS

N.S- Not Significant, **(p > 0.01), *(p >0.05), n = 10 values are mean ± S.D (One-way ANOVA followed by Dunnett's test)

Food intake (gm/day) of Wistar albino rats group exposed to *SWARNA PUSHPA RASA CHENDHURAM*

DOSE	DAYS		
	1	7	14
CONTROL	62.4±1.54	62.2±1.62	62.7±4.06
High DOSE	64.0±2.24	64.4±2.10	64.6±2.70

SUB -ACUTE TOXICITY

Repeated Dose 28- day oral toxic study ofSWARNA PUSHPA RASA CHENDHURAM

Body weight of wistar albino rats group exposed to *SWARNA PUSHPA RASA CHENDHURAM*

DOSE	DAYS				
	1	7	14	21	28
CONTROL	282.2±05.64	282.2 ± 10.04	282.4 ± 12.40	282.4± 14.40	282.2 ± 12.10
LOW DOSE	280.7 ± 57.75	280.4 ± 4.19	281.3± 5.21	282 ±1.40	282.6± 6.16
MID DOSE	281.1± 1.22	281.2 ± 2.21	281.2 ± 1.42	282.2 ± 5.08	282.4 ± 13.12
HIGH DOSE	275.2± 2.41	275.4±3.17	275.8 ± 2.64	276.2 ± 4.18	277 ± 3.30
P value (p)*	NS	NS	NS	NS	NS

NS- Not Significant, **(p > 0.01),*(p >0.05), n = 10 values are mean ± S.D (One way ANOVA followed by Dunnett's test)

Water intake (ml/day) of Wistar albino rats group exposed to *SWARNA PUSHPA RASA CHENDHURAM*

DOSE	DAYS				
	1	6	14	21	28
CONTROL	56.4 ± 2.34	56.2±1.07	56.7±1.30	56.8±1.10	56.4±1.70
LOW DOSE	63.6±1.81	63.6±2.43	63.6±1.72	63.7±2.36	63.7±1.30
MID DOSE	64.2±2.21	64.2±1.21	64.1±2.52	64.4±1.42	64.4±1.74
HIGH DOSE	58.2±3.40	58.2±1.42	58.4±1.44	58.6±1.78	58.8±2.62
P value (p)*	NS	NS	NS	NS	NS

N.S- Not Significant, **(p > 0.01), *(p >0.05), n = 10 values are mean ± S.D (One way ANOVA followed by Dunnett's test)

Food intake (gm/day) of Wistar albino rats group exposed to *SWARNA PUSHPA RASA CHENDHURAM*

DOSE	DAYS				
	2	7	23	22	28
CONTROL	61±3.01	61.2±2.11	61.4±3.11	61.4.2±3.42	61±3.40
LOW DOSE	59.5±7.12	59.5±1.44	59.6±1.50	59.4±1.20	59.8±1.92
MID DOSE	60.2±6.70	60.2±2.20	60.6±2.24	60.6±1.46	60.7±1.74
HIGH DOSE	64.3±1.55	64.6±1.54	64.8±2.16	65.1±1.50	65.1±1.72
P value (p)*	NS	NS	NS	NS	NS

N.S- Not Significant, **(p > 0.01), *(p >0.05), n = 10 values are mean ± S.D (One way ANOVA followed by Dunnett's test

Haematological parameters of Wistar albino rats group exposed to *SWARNA PUSHPA RASA CHENDHURAM*

Category	Control	Low dose	Mid dose	High dose	P value (p)*
Haemoglobin(g/dl)	34.6±0.43	34.6±0.30	34.6±0.13	34.6±0.23	N.S
Total WBC ($\times 10^3$ l)	9.1±0.40	9.12±0.01	9.1±0.08	9.13±1.30	N.S
Neutrophils (%)	15.1±0.20	15.12±0.23	15.13±1.06	15.14±1.07	N.S
lymphocyte (%)	80.10±1.36	80.10±1.20	80.12±1.24	81.20±1.34	N.S
Monocyte (%)	0.01±0.02	0.01±0.01	0.01±0.04	0.01±0.03	N.S
Eosinophil (%)	0.04±0.06	0.04±0.03	0.04±0.05	0.04±0.07	N.S
Platelets cells10^3/µl	1400.1±1.08	1400.3±4.84	1400.2±4.60	1400.4±6.32	N.S
Total RBC 10^6/µl	9.32±0.64	9.32±0.652	9.65±0.08	9.66±0.05	N.S
PCV%	34.60±0.8	34.63±6.23	34.6±1.31	34.8±8.22	N.S
MCHC g/Dl	35.2±1.42	35.4±1.22	35.6±1.52	35.8±1.23	N.S
MCV fL(µm^3)	54.8±1.21	54.8±1.20	54.6±1.11	54.7±1.10	N.S

N.S- Not Significant, **(p > 0.01), *(p >0.05), n = 10 values are mean ± S.D (One way ANOVA followed by Dunnett's test)

Biochemical Parameters of Wistar albino rats group exposed to *SWARNA PUSHPA RASA CHENDHURAM*

BIOCHEMICAL PARAMETERS	CONTROL	LOW DOSE	MID DOSE	HIGH DOSE	P Value (p)*
GLUCOSE (R) (mg/dl)	85.10±1.22	85.13±1.31	85.6±.04	85.7±6.20	N.S
T.CHOLESTEROL(mg /dl)	105.10±3.10	105.15±2.20	105.10±1.17	105.11±13	N.S
TRIGLY(mg/dl)	76.03±1.04	76.04±1.32	76.05±1.32	76.06±1.04	N.S
LDL	69.2±4.13	69.4±1.45	69.3±1.23	69.4±2.22	NS
VLDL	14.6±1.30	14.6±1.42	14.6±1.22	14.4±1.24	NS
HDL	24.12±2.30	24.12±2.30	24.16±1.42	24.65±1.34	NS
Ratio 1(T.CHO/HDL)	5.1±1.10	5.1±1.20	5.1±1.30	5.1±1.60	NS
Ratio 2(LDL/HDL)	2.85±2.13	2.85±1.20	2.85±2.20	2.85±04.02	NS
Albumin(g/dL)	3.2±0.10	3.2±0.64	3.2±4.80	3.3±3.24	NS

NS- Not Significant,**(p > 0.01), * (p >0.05), n = 10 values are mean ± S.D (One way ANOVA followed by Dunnett's test)

Renal function test of Wistar albino rats group exposed to *SWARNA PUSHPA RASA CHENDHURAM*

PARAMETERS	CONTROL	LOW DOSE	MID DOSE	HIGH DOSE	P Value (p)*
UREA (mg/dl)	22.11±0.10	22.10±0.15	22.16±1.22	22.12±1.63	N.S
CREATININE(mg/dl)	0.6±0.02	0.6±0.03	0.6±0.05	0.6±0.09	N.S
BUN(mg/dL)	27.5±0.03	27.5±0.14	27.8±0.30	27.8±1.40	NS
URIC ACID(mg/dl)	6.04±0.02	6.1±0.20	6.1±0.30	6.2±0.60	N.S

NS- Not Significant, **(p > 0.01), * (p >0.05) , n = 10 values are mean ± S.D (One way ANOVA followed by Dunnett's test)

Liver Function Test of Wistar albino rats group exposed to *SWARNA PUSHPA RASA CHENDHURAM*

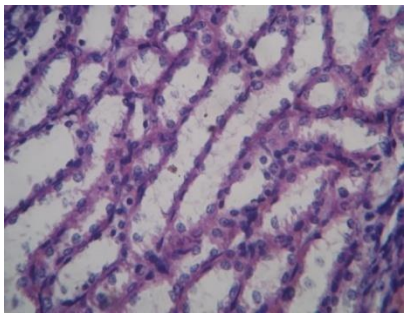
PARAMETERS	CONTROL	LOW DOSE	MID DOSE	HIGH DOSE	P Value (p)*
T BILIRUBIN(mg/dl).	0.07±0.07	0.07±0.02	0.07±0.04	0.07±0.01	N.S
SGOT/AST(U/L)	132.1±1.33	132.2±0.32	132.4±1.33	132.6±1.43	N.S
SGPT/ALT(U/L)	99.10±1.44	99.14±1.10	99.24±1.64	99.23±0.20	N.S
ALP(U/L)	182.40±1.12	182.2±1.14	183±1.24	184.3±2.51	N.S
T.PROTEIN(g/dL)	6.5±0.13	6.5±0.21	6.7±0.32	6.7±0.34	N.S

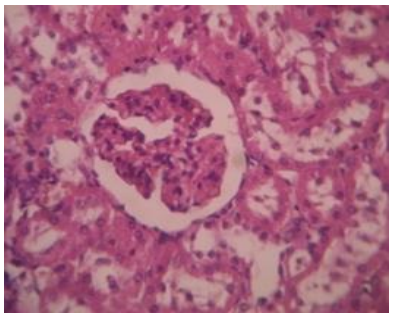
NS- Not Significant, **(p > 0.01), * (p >0.05), n = 10 values are mean ± S.D (One way ANOVA followed by Dunnett's test

HISTO PATHOLOGY

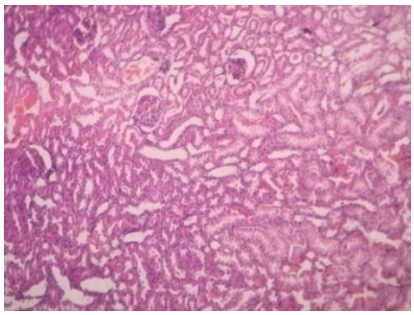
CONTROL GROUP **HIGH DOSE**

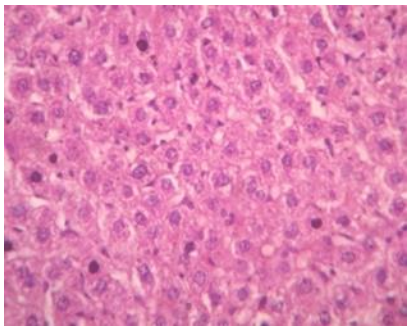
Kidney



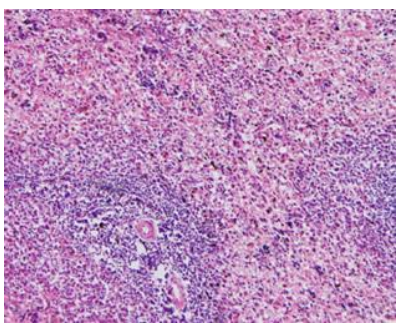


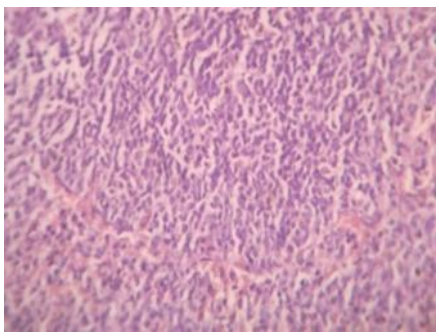
Liver





Spleen





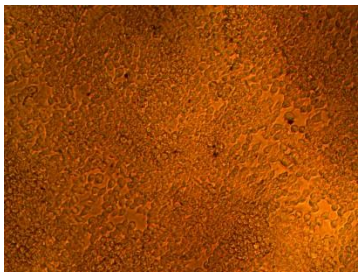
PRAMACOLOGICAL ACTIVITY

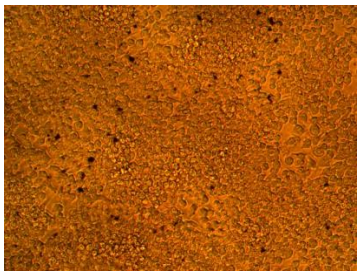
ACTIVITY: ANTI PSORIATIC ACTIVITY

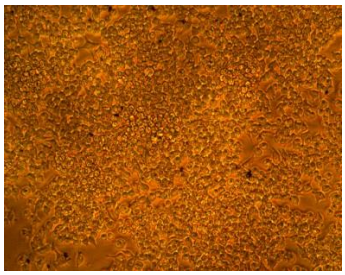
CELL LINE MODEL: HUMAN KERATINOCYTE CELL LINES

(HaCaT)

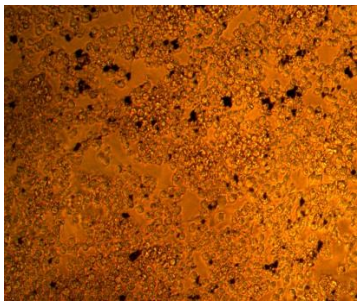
Control **6.25µg/ml** **12.5µg/ml**

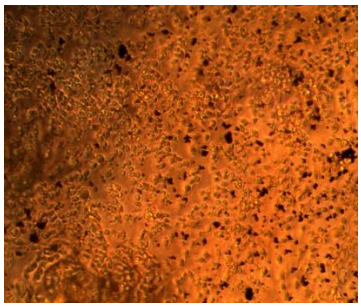


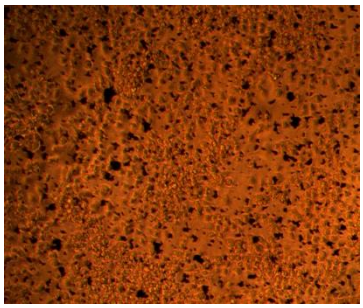




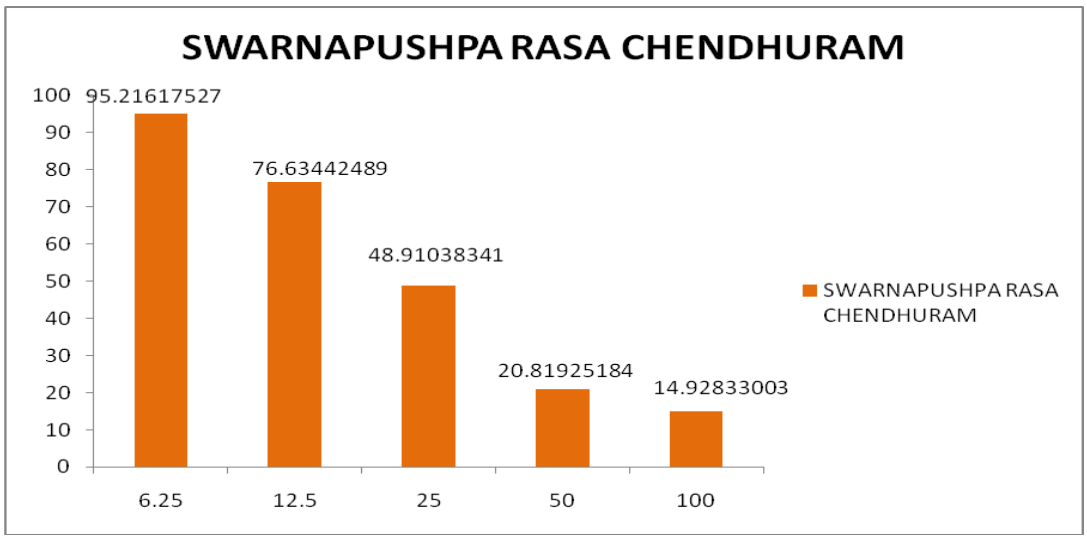
25**µg/ml** 50**µg/ml** **100µg/ml**







Sample Concentration (µg/ml)	Average Absorbance @ 540nm	Percentage Viability
CONTROL (LPS stimulated)	**0.8581**	
6.25	0.81705	95.21617527
12.5	0.6576	76.63442489
25	0.4197	48.91038341
50	0.17865	20.81925184
100	0.1281	14.92833003



LD 50 value – 40.3841 **µg/ml**

OBSERVATION:

LPS treatment produced effects similar to psoriasis as reported and the compound was effective in limiting the increased proliferation in HaCaT cells. 100ug/ml reduced the cell viability to 14.9% which is significant**.**

Results of the study were observed with respect to the following criteria

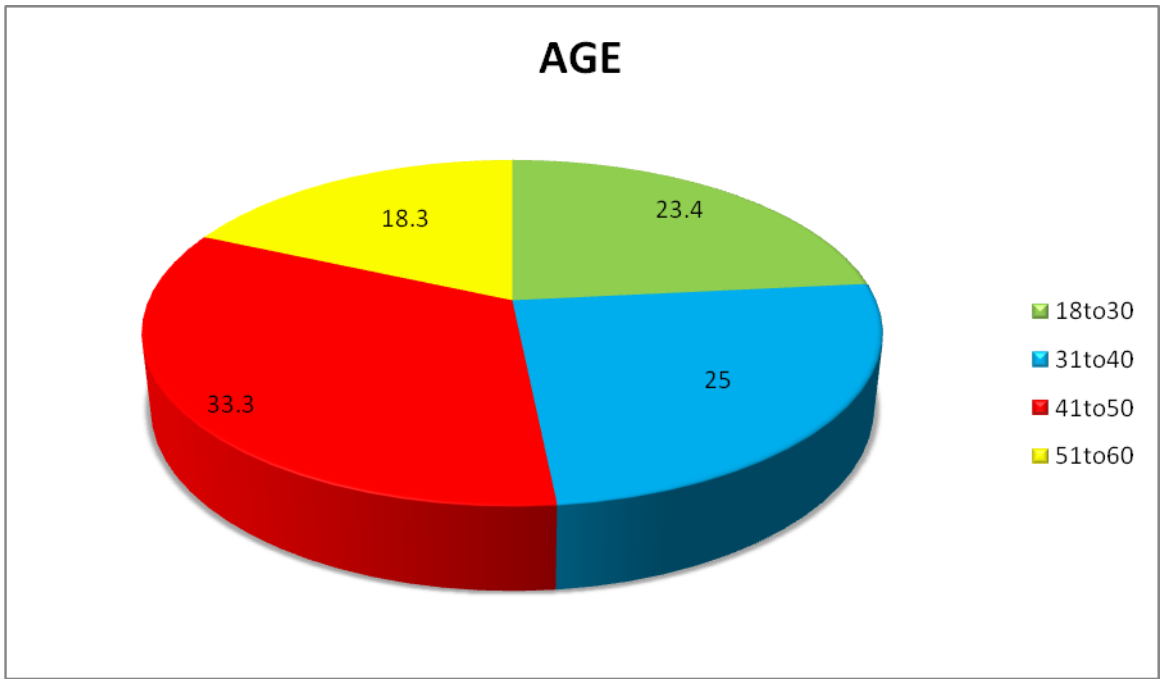
1. Age distribution
2. Gender distribution
3. Occupational distribution
4. Family history
5. Socio economic status
6. Diet
7. Triggering factors
8. Clinical features
9. Associated clinical features
10. Onset of disease

OBSERVATIONS:

In the present clinical study, 60 patients of psoriasis were treated in the three groups completed the study plan. Following are the demographical observations made in this clinical study.

1. AGE DISTRIBUTION:

S.NO	AGE IN YEARS	NO OF CASES (OUT OF 60)	PERCENTAGE
1.	18 to 30	14	23.4
2.	31 to 40	15	25
3.	41 to 50	20	33.3
4.	51 to 60	11	18.3

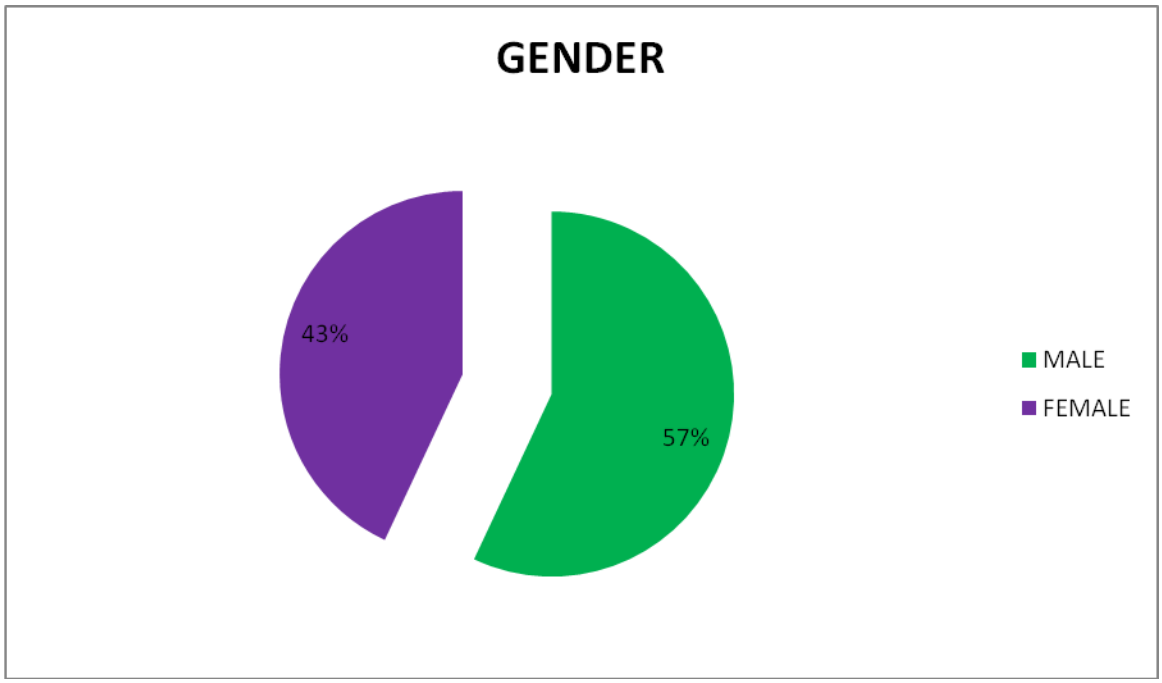


OBSERVATION:

Among 60 cases, high age incidence (33.3%) is Between 41 – 50yr, low age incidence (18.3%) is Between 51 – 60yr.

2. GENDER DISTRIBUTION:

S.NO	SEX	NO OF CASES (OUT OF 60)	PERCENTAGE
1.	Male	34	57
2.	Female	26	43

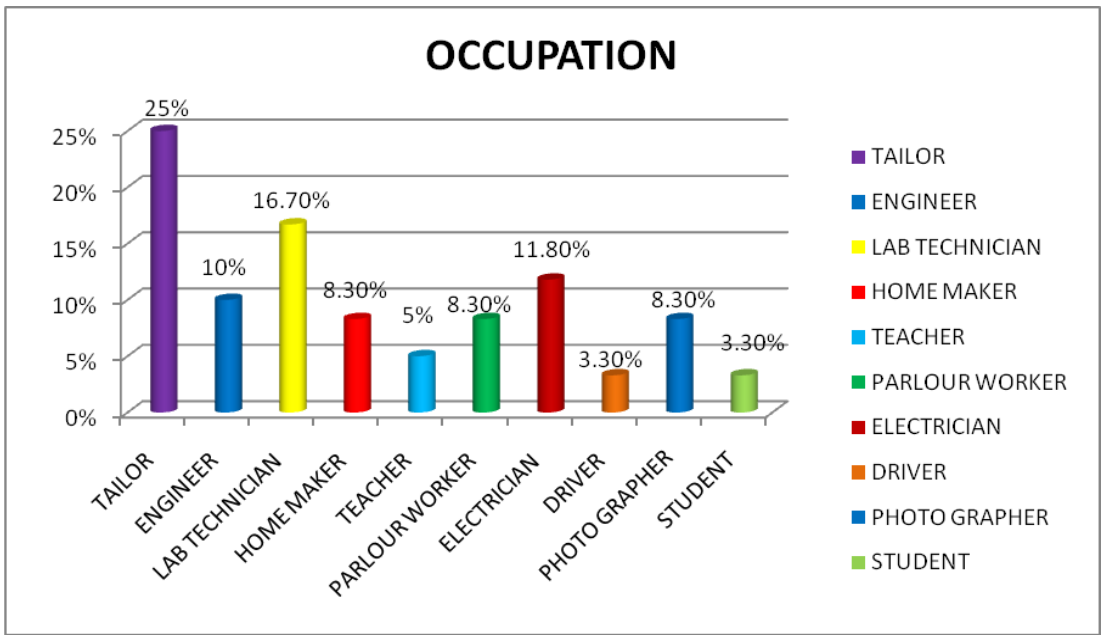


OBSERVATION:

Among 60 patients, 34 patients (57%) were male, 26 patients (43%) were Female.

3. OCCUPATIONAL DISTRIBUTION:

S.NO	OCCUPATION	NO OF CASES (OUT OF 60)	PERCENTAGE
1.	TAILOR	15	25
2.	ENGINEER	6	10
3.	LAB TECHNICIAN	10	16.7
4.	HOME MAKER	5	8.3
5.	TEACHER	3	5
6.	PARLOUR WORKER	5	8.3
7.	ELECTRICIAN	7	11.8
8.	DRIVER	2	3.3
9.	PHOTO GRAPHER	5	8.3
10.	STUDENT	2	3.3

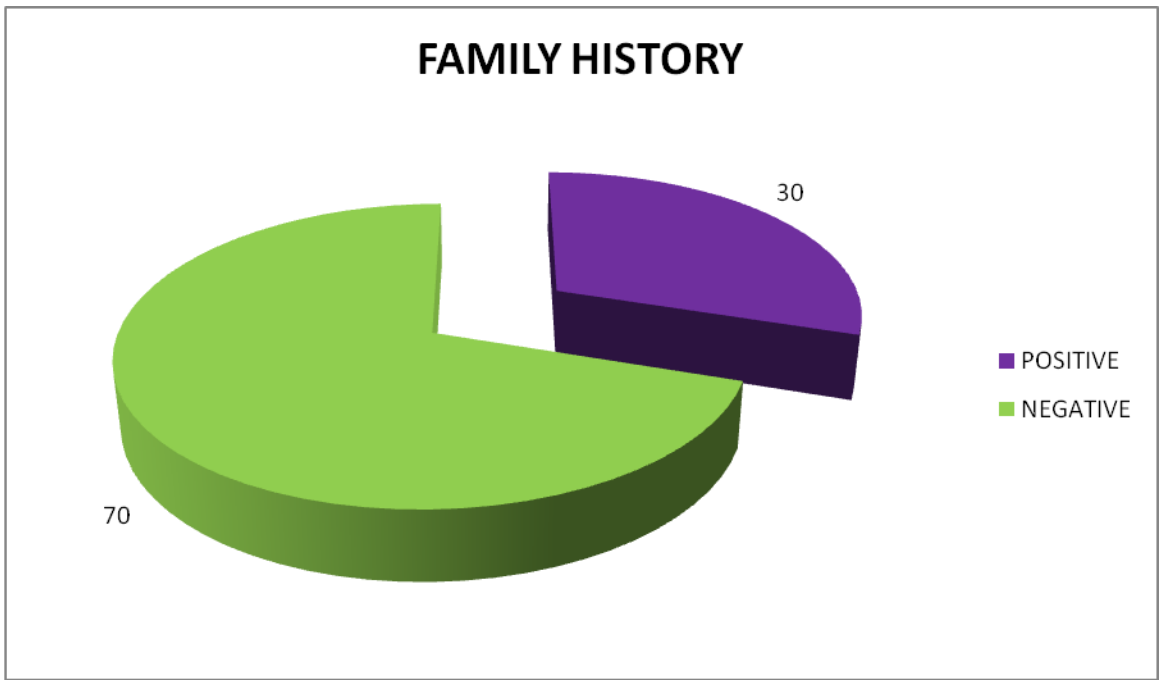


OBSERVATION

Among 60 patients, 15 Out of patients were tailor (25%), because due to mechanical stress.

4. FAMILY HISTORY:

S.NO	FAMILY HISTORY	NO OF CASES (OUT OF 60)	PERCENTAGE
1.	Positive history	18	30
2.	Negative history	42	70

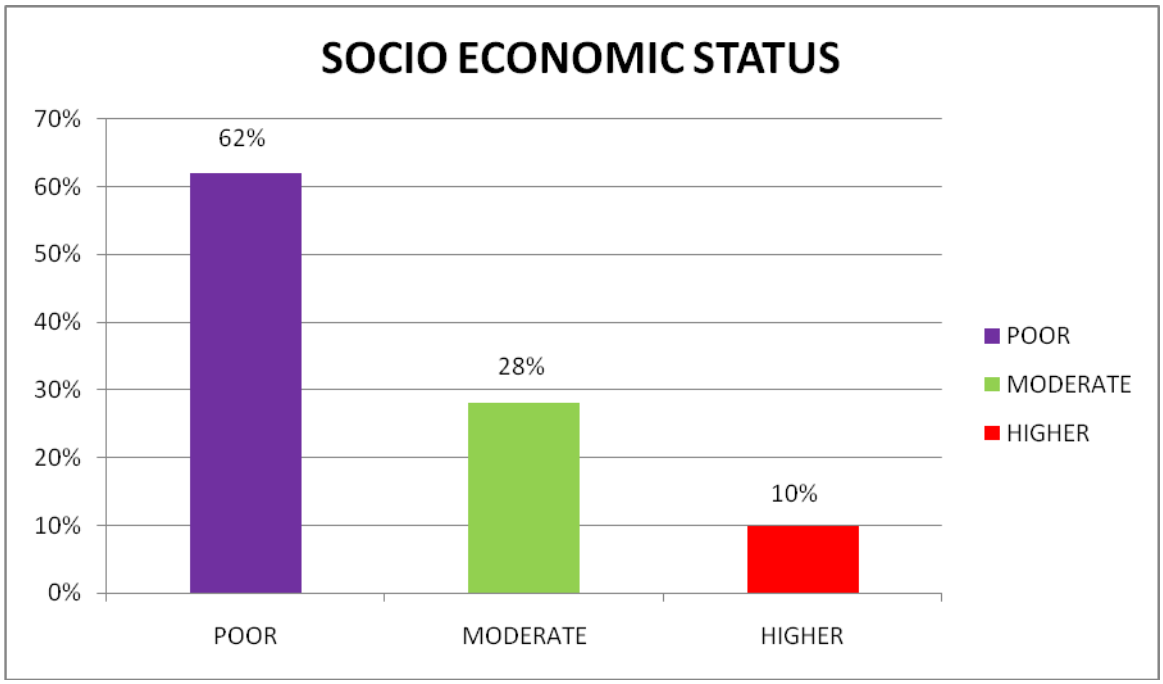


OBSERVATION:

Among 60 patients only 18 patients (30%) were having positive family history.

5. SOCIO ECONOMIC STATUS:

S.NO	SOCIO ECONOMIC STATUS	NO OF CASES (OUT OF 60)	PERCENTAGE
1.	POOR	37	62%
2.	MODERATE	17	28%
3.	HIGHER	6	10%

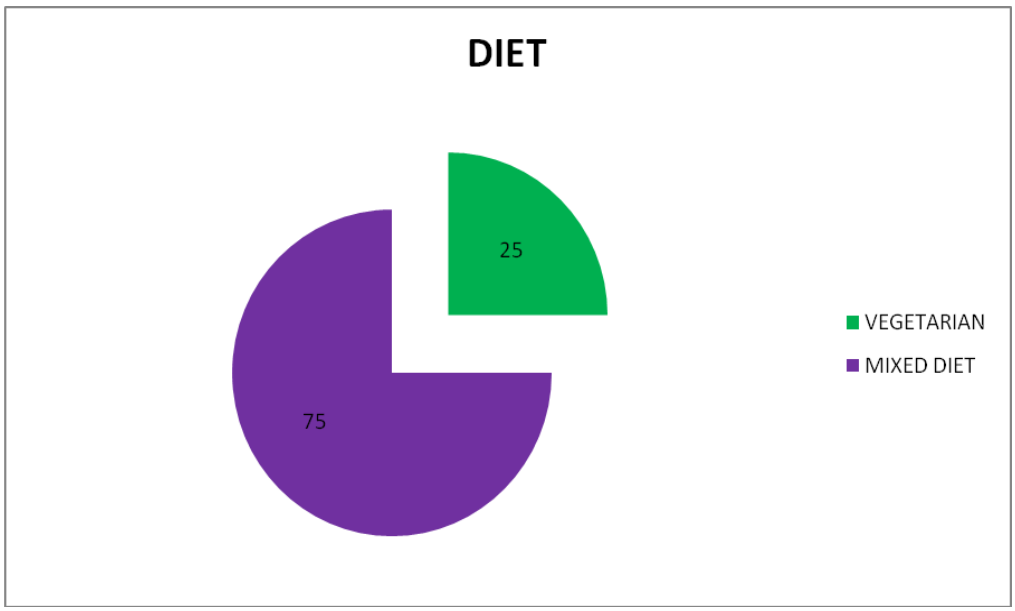


OBSERVATION:

Among 60 patients 37 patients were low income group (62%), 17 patients were middle Income group (28%), 6 patients were higher income group (10%).

6. DIET:

S.NO	DIET	NO OF CASES (OUT OF 60)	PERCENTAGE
1.	Vegetarian	15	25
2.	Mixed diet	45	75

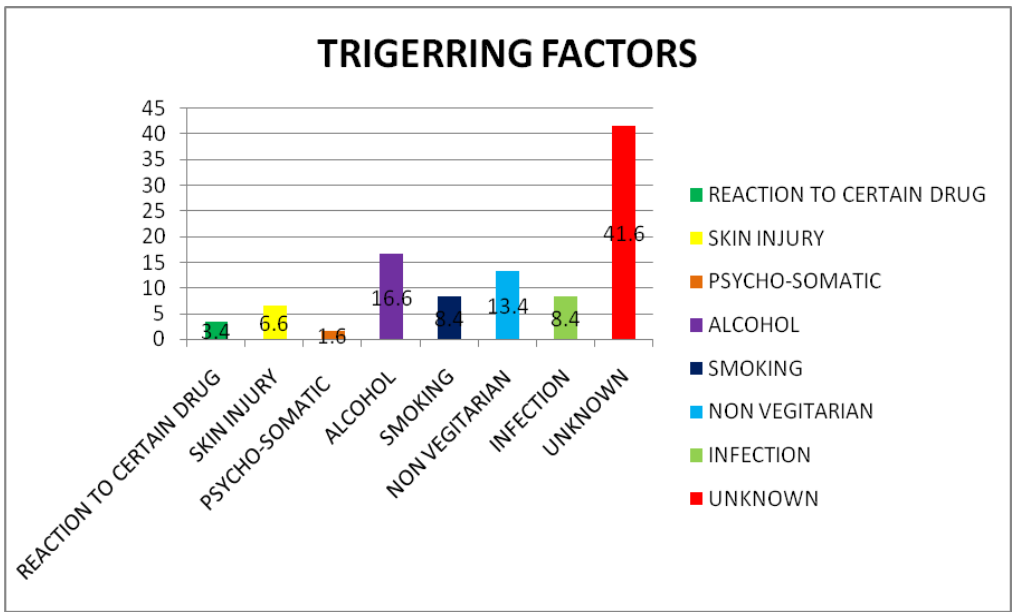


OBSERVATION:

Among 60 patients, 45 patients were non vegetarian (75%), 15 patients were vegetarian (25%).

7.TRIGERRING FACTORS:

S. NO	TRIGERRING FACTORS	NO OF PATIENTS (OUT OF 60)	PERCENTAGE %
1	REACTION TO CERTAIN DRUG	2	3.4%
2	SKIN INJURY	4	6.6%
3	PSYCHO-SOMATIC	1	1.6%
4	ALCOHOL	10	16.6%
5	SMOKING	5	8.4%
6	NON VEGITARIAN	8	13.4%
7	INFECTION	5	8.4%
8	UNKNOWN	25	41.6%

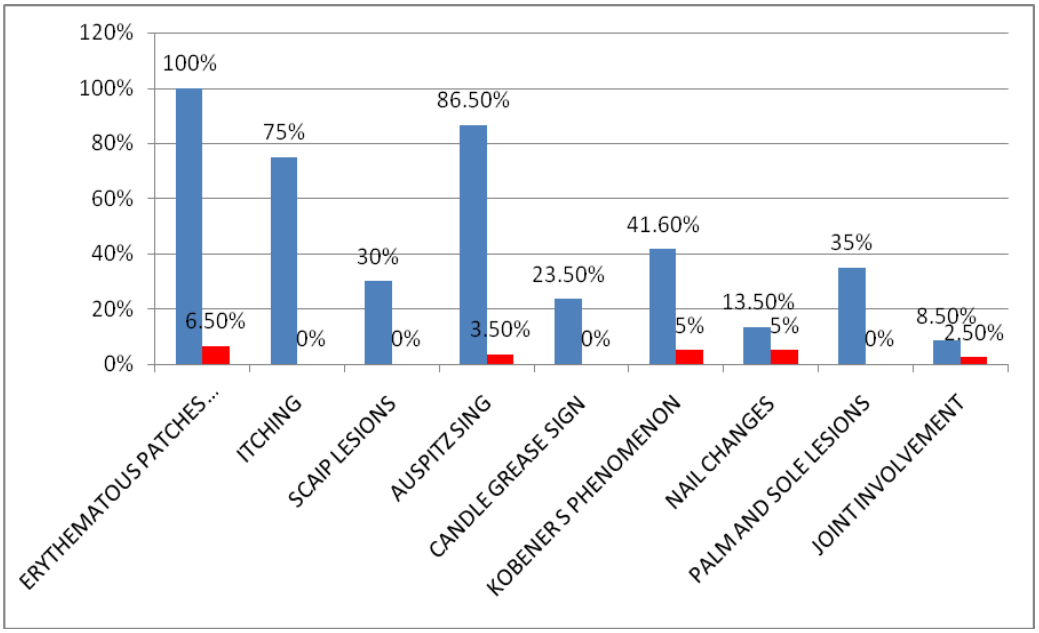


OBSERVATION:

Among 60 patients, 25 patients were unknown origin (41.6%), 8 patients were non vegetarian (13.4%),10 patients due to had alcohol (16.6%), 5 patients due to infection (8.4%), 5 patients due to had smoking as a factor (8.4%), 4 patients were skin injury (6.6%), 2 patients were Reaction to certain drug (3.4%), 1 patients were in Psycho somatic origin (1.6%) .

8.CLINICAL FEATURES:

S. No	CLINICAL FEATURE	BEFORE TREATMENT		AFTER TREATMENT	
		NOOF PATIENTS	PERCEN TAGE %	NOOF PATIENTS	PERCEN TAGE %
1	ERYTHEMATOUS PATCHESWITHWHITE SILVERY SCALES	60	100%	2	3.5%
2	ITCHING	45	75%	NIL	0%
3	SCALP LESIONS	18	30%	NIL	0%
4	AUSPITZ SIGN	52	86.5%	2	3.5%
5	CANDLEGREASE SIGN	14	23.5%	NIL	0%
6	KOBNER'S PHENOMENON	25	41.6%	3	5%
7	NAIL CHANGES	8	13.5%	3	5%
8	PALM AND SOLE LESIONS	21	35%	NIL	0%
9	JOINT INVOLVEMENT.	5	8.5%	1	2.5%

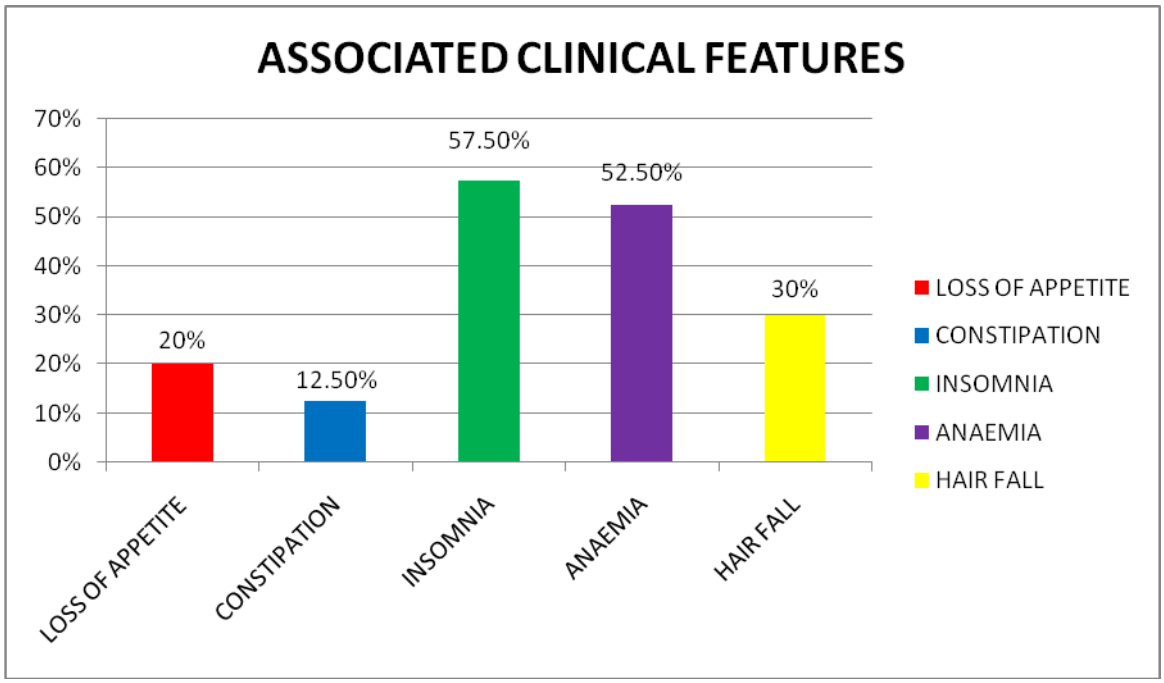


OBSERVATION:

Among 60 patients have Erythematous patches with white silvery scales and Auspitz sign, Itching, Koebner's phenomenon as their predominant symptoms in BT, but after treatment symptoms is fully reduced, nail and joint involvement mildly present.

9. ASSOCIATED CLINICAL FEATURES:

S. No	CLINICAL FEATURES	NO OF PATIENTS	PERCENTAGE %
1	LOSS OF APPETITE	9	20%
2	CONSTIPATION	7	12.5%
3	INSOMNIA	25	57.5%
4	ANAEMIA	21	52.5%
5	HAIR FALL	17	30%

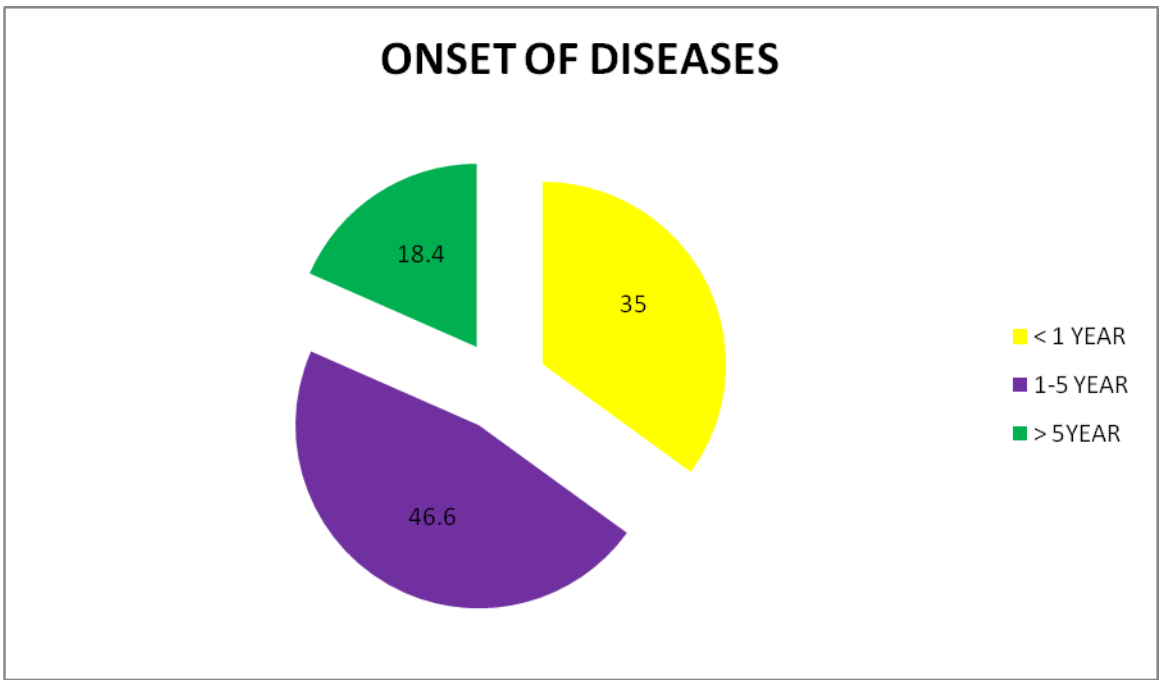


OBSERVATION:

Among 60 patients 7 had constipation,17 had hair fall,25 had sleep disturbances, 9 had loss of appetite and 21 were anemic.

10. ONSET OF DISEASE:

S. NO	ONSET OF DISEASE	NO OF PATIENTS (OUT OF 60)	PERCENTAGE %
1	LESS THAN 1YEAR	21	35
2	1YEAR-5YEAR	28	46.6
3	MORE THAN 5YEAR	11	18.4



OBSERVATION:

Among 60 patients, 21 had less than 1 yr (46.6%), 28 had 1-5year (35%), 11 had More than 5 years (18.4%).

GROUP I

PASI SCORE FOR OPD PATIENTS TREATED WITH **SWARNA PUSHPA RASA CHENDHURAM** (INT), **VETTIVER THYLAM** (EXT) &**PRANAYAMAN.**

S. NO	OP. NO	AGE/ SEX	DOA	DOD	INITIAL PASI SCORE	POST PASI SCORE	SYMPTOMS REDUCED PER WEAK	RESULT
1	1283	49/F	16/06/16	25/07/16	16.2	4.0	7	Marked
2	1162	30/F	09/08/16	21/09/16	31.8	4.6	6	Marked
3	4228	58/F	14/07/16	26/08/16	19.4	4.1	6	Marked
4	5002	44/F	18/07/16	03/09/16	4.8	1.0	7	Marked
5	5104	39/F	18/07/16	16/08/16	22.8	6.8	4	Moderate
6	4137	34/F	25/09/16	14/11/16	4.8	0	7	Marked
7	1994	28/F	11/10/16	23/11/16	32.8	8.2	6	Marked
8	8354	43/F	07/08/16	12/09/16	27.2	0	5	Marked
9	5013	37/F	22/06/16	4/08/16	30.9	3.4	6	Marked
10	2912	53/F	16/08/16	05/10/16	2.7	0.6	7	Marked
11	9115	43/M	02/05/17	21/06/16	42.4	4.8	7	Marked
12	4995	40/M	10/11/16	15/12/16	22.6	5.7	5	Moderate
13	3365	42/M	12/07/16	01/08/16	27.3	2	7	Marked
14	3435	26/M	12/07/16	03/08/16	12	8.3	3	Mild
15	7638	24/M	27/07/16	09/09/16	14.4	0	6	Marked
16	4986	30/M	18/07/16	23/08/16	20.2	7.4	5	Moderate
17	5087	49/M	24/08/16	13/10/16	41.6	4.4	7	Marked
18	1670	48/M	20/09/16	02/11/16	4.8	0	6	Marked
19	3133	30/M	05/10/16	17/11/16	14	1.8	6	Marked
20	7137	37/M	27/06/16	16/08/16	21.3	0	7	Marked

GROUP II

PASI SCORE FOR OPD PATIENTS TREATED WITH **SWARNA PUSHPA RASA CHENDHURAM** (INT), **VETTIVER THYLAM** (EXT).

S. NO	OP. NO	AGE/ SEX	DOA	DOD	INITIAL PASI SCORE	POST PASI SCORE	SYMPTOMS REDUCED PER WEAK	RESULT
1	9658	25/M	08/08/16	20/09/16	14.4	0	6	Marked
2	7894	42/M	11/08/16	30/09/16	21.6	5.2	7	Marked
3	5612	36/M	15/0816	04/10/16	60	10.8	7	Marked
4	3012	55/M	21/0816	03/10/16	15.6	0	6	Marked
5	9632	45/M	23/08/16	11/09/16	13.6	5.4	4	Moderate
6	5284	56/M	30/08/16	12/10/16	21	0	6	Marked
7	1478	27/M	3/09/16	15/10/16	11.8	0.8	6	Marked
8	4563	46/M	07/09/16	12/10/16	11.8	3.2	5	Moderate
9	2354	52/M	14/0916	03/11/16	60	6.4	7	Marked
10	6589	59/M	18/09/16	30/10/16	57	7.0	6	Marked
11	1452	36/M	27/09/16	09/11/16	21.1	0.6	6	Marked
12	6325	41/M	21/10/16	10/12/16	23.5	4.6	7	Marked
13	7896	32/M	07/10/16	26/11/16	10.8	0	7	Marked
14	7852	51/M	15/10/16	27/11/16	23.2	4.8	6	Marked
15	2365	28/F	20/10/16	09/12/16	24.6	0	7	Marked
16	2031	55/F	23/10/16	29/11/16	8.8	2.8	5	Moderate
17	9630	59/F	28/10/16	30/11/16	21.3	0	6	Marked
18	7456	25/F	09/11/16	07/12/16	14.4	6.4	4	Moderate
19	2368	43/F	05/08/16	24/09/16	16.4	2.2	7	Marked
20	3148	27/F	19/09/16	24/10/16	18.8	4.8	5	Moderate

GROUP III

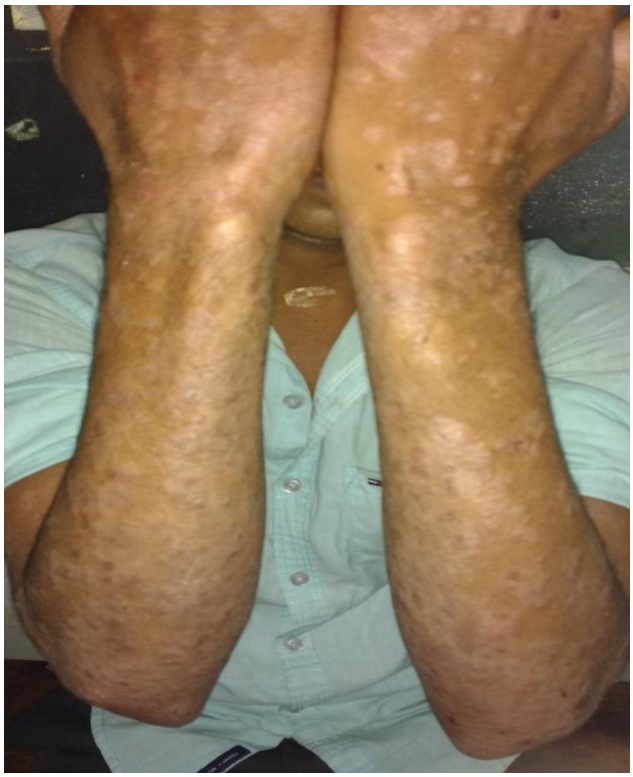
PASI SCORE FOR OPD PATIENTS TREATED WITH

VETTIVER THYLAM (EXT) &**PRANAYAMAM**

S. NO	OP. NO	AGE/ SEX	DOA	DOD	INITIAL PASI SCORE	POST PASI SCORE	SYMPTOMS REDUCED PER WEAK	RESULT
1	5086	25/M	18/07/16	09/08/16	14.4	8	3	Mild
2	5268	45/M	18/07/16	18/09/16	16.4	2.2	6	Marked
3	9920	42/M	05/08/16	10/09/16	18.8	4.8	5	Moderate
4	4570	57/M	22/08/16	11/10/16	16.2	4.0	7	Marked
5	5460	49/M	20/07/16	02/09/16	31.8	4.6	6	Marked
6	5171	45/M	18/07/16	03/09/16	19.4	4.1	7	Marked
7	7369	31/M	26/07/16	08/09/16	4.8	1.0	6	Marked
8	3107	42/M	21/06/16	26/07/16	22.8	6.8	5	Moderate
9	3109	59/M	11/07/16	30/08/16	60	10.8	7	Marked
10	2798	18/M	16/08/16	28/09/16	15.6	0	6	Marked
11	1392	39/F	11/05/16	02/06/16	13.6	6.4	3	Mild
12	2102	40/F	07/12/16	19/01/17	57	7.0	6	Marked
13	769	38/F	06/09/16	25/10/16	21.1	0.6	7	Marked
14	2580	50/F	08/07/16	27/08/16	23.5	4.6	7	Marked
15	6566	22/F	28/06/16	10/08/16	10.8	0	6	Marked
16	5931	36/F	05/07/16	24/08/16	23.2	4.8	7	Marked
17	3124	50/F	09/07/16	21/08/16	21.3	0	6	Marked
18	5469	33/F	15/07/16	27/08/16	42.4	4.8	6	Marked
19	5224	45/F	21/07/16	26/08/16	22.6	5.7	5	Moderate
20	3001	38/F	24/07/16	29/08/16	18.8	4.8	5	Moderate

CLINICAL IMPROVEMENT

OP NO.7638 **AGE : 24 / MALE**



BEFORE TREATMENT

DURING TREATMENT

AFTER TREATEMENT

OP NO. 5104 **AGE : 39 / FEMALE**

BEFORE TREATMENT

DURING TREATMENT

AFTER TREATEMENT

OP NO. 5460

AGE : 47 / MALE

BEFORE TREATMENT

AFTER TREATEMENT

BEFORE TREATMENT

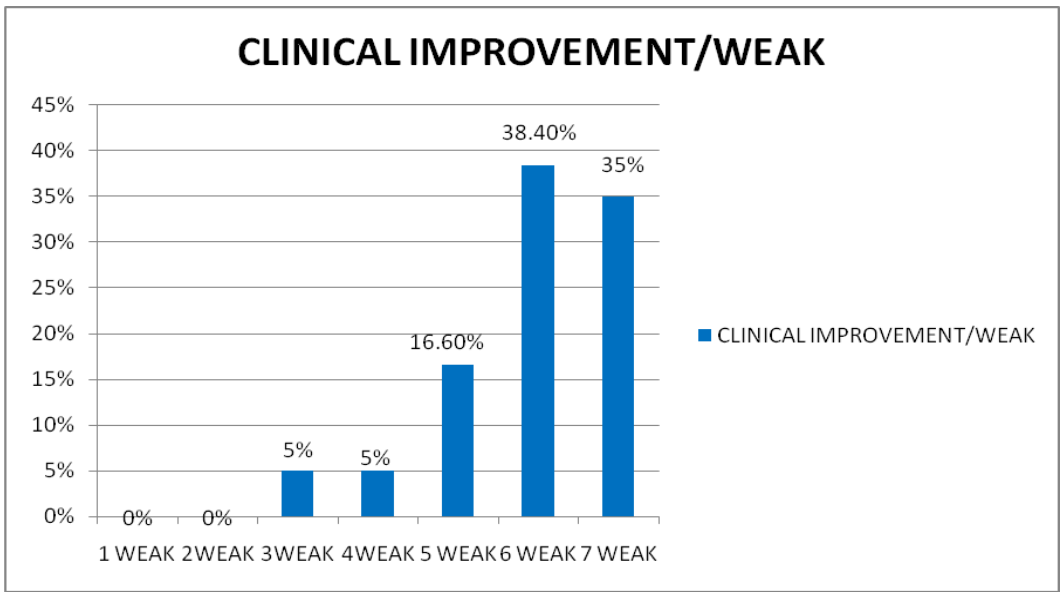
AFTER TREATEMENT

OP NO. 4986 **AGE : 30 / MALE**

BEFORE TREATMENT **AFTER TREATEMENT**

CLINICAL IMPROVEMENT IN WEAK BASED ON PASI SCORE

S.NO	WEAKS	OP PATIENTS	PERCENTAGE%
1	1WEAK	NIL	0%
2	2WEAK	NIL	0%
3	3 WEAK	3	5%
4	4 WEAK	3	5%
5	5 WEAK	10	16.6%
6	6 WEAK	23	38.4%
7	7 WEAK	21	35%



OBSERVATION:

The clinical efficacy of SPRC was apparent from the PASI score at weak, Among the 60 patients, 3 patients (5%) had symptoms reduction in 3 weeks, 3 patients (5%) had symptoms reduction in 4 weeks, 10 patients (16.6%) had symptoms reduction in 5 weeks, 23 patients (38.4%) had symptoms reduction in 6 weeks, 21 patients (35%) had symptoms reduction in 7weeks were noticed per week.

PASI SCORE FOR OPD PATIENTS TREATED WITH**SWARNA PUSHPA RASA CHENDHURAM** (INT), **VETTIVER THYLAM** (EXT) &**PRANAYAMAN.GROUP I**

S.No.	OP No.	PASI SCORE		% of Reduction PASI
		BT	AT	
1	1283	16.2	4	75.3
2	1162	31.8	4.6	85.5
3	4228	19.4	4.1	78.8
4	5002	4.8	1.0	79.1
5	5104	22.8	6.8	70.2
6	4137	4.8	0	100
7	1994	32.8	8.2	75
8	8354	27.2	0	100
9	5013	30.9	3.4	88.9
10	2912	2.7	0.6	77.7
11	9115	42.4	4.8	88.6
12	4995	22.6	5.7	74.7
13	3365	27.3	2	92.6
14	3435	12	8.3	30.8
15	7638	14.4	0	100
16	4986	20.2	7.4	63.3
17	5087	41.6	4.4	89.4
18	1670	4.8	0	100
19	3133	14	1.8	87.1
20	7137	21.3	0	100

CLINICAL IMPROVEMENT BASED ON PASI SCORE

Criteria fixed to assess the clinical improvement was as follows,

Marked improvement : PASI ≥ 75%

Moderate improvement : PASI 50% < 75%

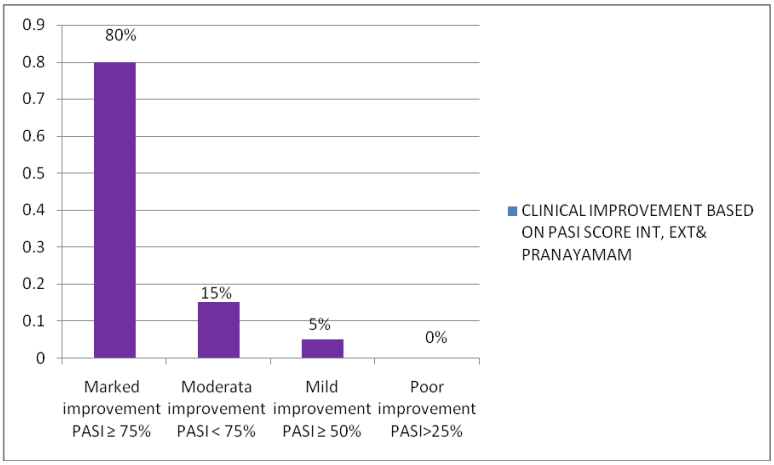
Mild improvement : PASI 25 ≥ 50%

Poor improvement : PASI > 25%

CLINICAL IMPROVEMENT BASED ON PASI SCORE

PATIENT TREATED WITH INTERNAL& EXTERNAL MEDICINE & PRANAYAMAM

S. NO	EFFECT OF TRIAL MEDICINE	NO OF PATIENTS	PERCENTAGE %
1	Marked improvement PASI	16	80%
2	Moderate improvement PASI < 75%	3	15 %
3	Mild improvement PASI ≥ 50%	1	5%
4	Poor improvement PASI > 25%	NIL	0%
TOTAL		20	100%



OBSERVATION:

Among 60 patients treated in OPD, out of 20 patients given internal drug, external drug &pranayamam, 16 out of 20 patients had marked improvement (80%), 3 out of 20 patients had moderate improvement (15%), 1 out of 20 patients had mild improvement (5%).

PASI SCORE FOR OPD PATIENTS TREATED WITH

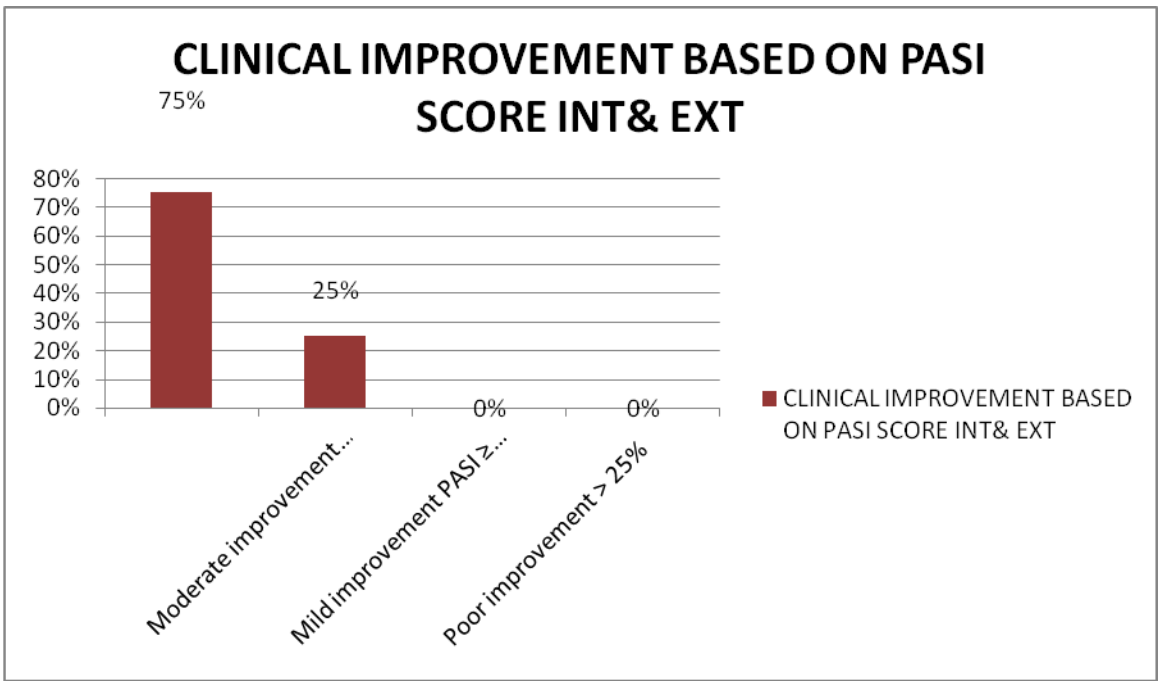
SWARNA PUSHPA RASA CHENDHURAM (INT), **VETTIVER THYLAM** (EXT).**GROUP II**

S.No.	OP No.	PASI SCORE		% of Reduction PASI
		BT	AT	
1	9658	14.4	0	100
2	7894	21.6	5.2	75.9
3	5612	60	10.8	82
4	3012	15.6	0	100
5	9632	13.6	5.4	60.2
6	5284	21	0	100
7	1478	11.8	0.8	93.2
8	4563	11.8	3.2	72.8
9	2354	60	6.4	89.3
10	6589	57	7.0	87
11	1452	21.1	0.6	97.1
12	6325	23.5	4.6	80.4
13	7896	10.8	0	100
14	7852	23.2	4.8	67.7
15	2365	24.6	0	100
16	2031	8.8	2.8	68
17	9630	21.3	0	100
18	7456	14.4	6.4	55.5
19	2368	16.4	2.2	86.5
20	3148	18.8	4.8	74.4

CLINICAL IMPROVEMENT BASED ON PASI SCORE

PATIENT TREATED WITH INTERNAL& EXTERNAL MEDICINE

S. NO	EFFECT OF TRIAL MEDICINE	NO OF PATIENTS	PERCENTAGE %
1	Marked improvement PASI ≥ 75%	15	75%
2	Moderate improvement PASI < 75%	5	25%
3	Mild improvement PASI ≥ 50%	NIL	0%
4	Poor improvement PASI > 25%	NIL	0%
TOTAL		20	100%



OBSERVATION:

Among 60 patients treated in OPD, out of 20 patients given internal drug, external drug, 15out of 20 patients had marked improvement (75%), 5 out of 20 patients had moderate improvement (25%) .

PASI SCORE FOR OPD PATIENTS TREATED WITH

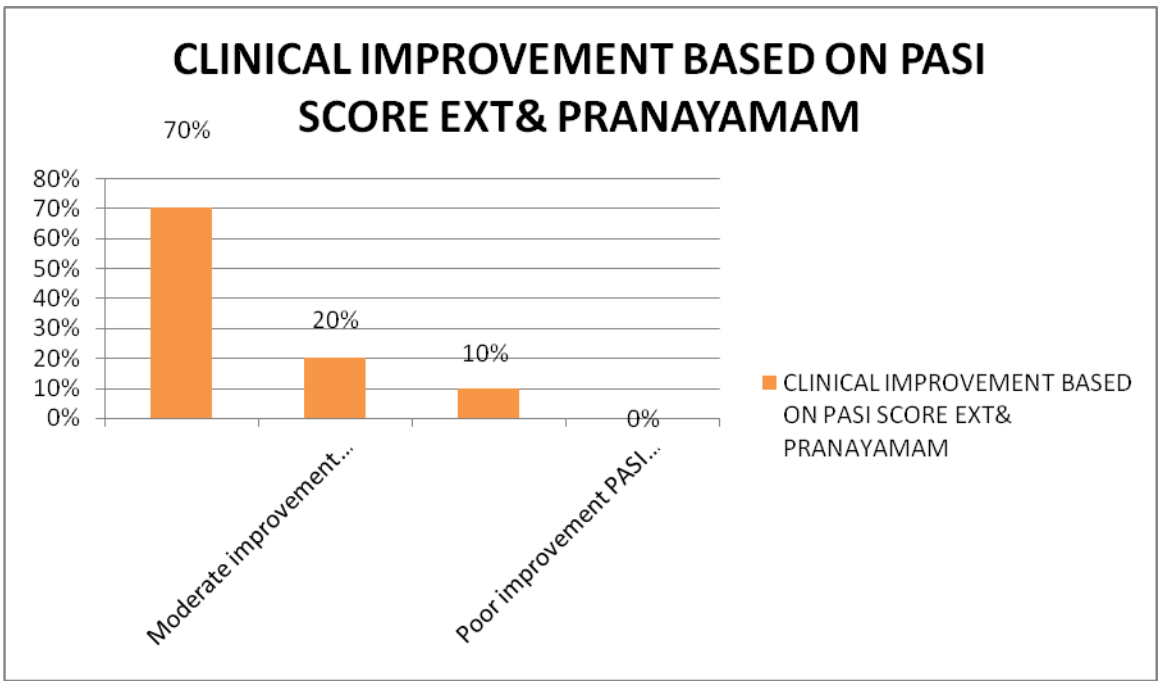
VETTIVER THYLAM (EXT) &**PRANAYAMAMGROUP III**

S.No.	OP No.	PASI SCORE		% of Reduction PASI
		BT	AT	
1	5086	14.4	8	44.4
2	5268	16.4	2.2	86.5
3	9920	18.8	4.8	74.4
4	4570	16.2	4.0	75.3
5	5460	31.8	4.6	85.5
6	5171	19.4	4.1	78.8
7	7369	4.8	1.0	79.16
8	3107	22.8	6.8	70.1
9	3109	60	10.8	82
10	2798	15.6	0	100
11	1392	13.6	6.4	60.2
12	2102	57	7	87.7
13	769	21.1	0.6	97
14	2580	23.5	4.6	80.4
15	6566	108.	0	100
16	5931	23.2	4.8	79.3
17	3124	21.3	0	100
18	5469	42.4	4.8	88.6
19	5224	22.6	5.7	74.7
20	3001	18.8	4.8	74.4

CLINICAL IMPROVEMENT BASED ON PASI SCORE

PATIENT TREATED WITH EXTERNAL MEDICINE & PRANAYAMAM

S. NO	EFFECT OF TRIAL MEDICINE	NO OF PATIENTS	PERCENTAGE %
1	Marked improvement PASI ≥ 75%	14	70%
2	Moderate improvement PASI < 75%	4	20 %
3	Mild improvement PASI ≥ 50%	2	10%
4	Poor improvement PASI > 25%	NIL	0%
TOTAL		20	100%



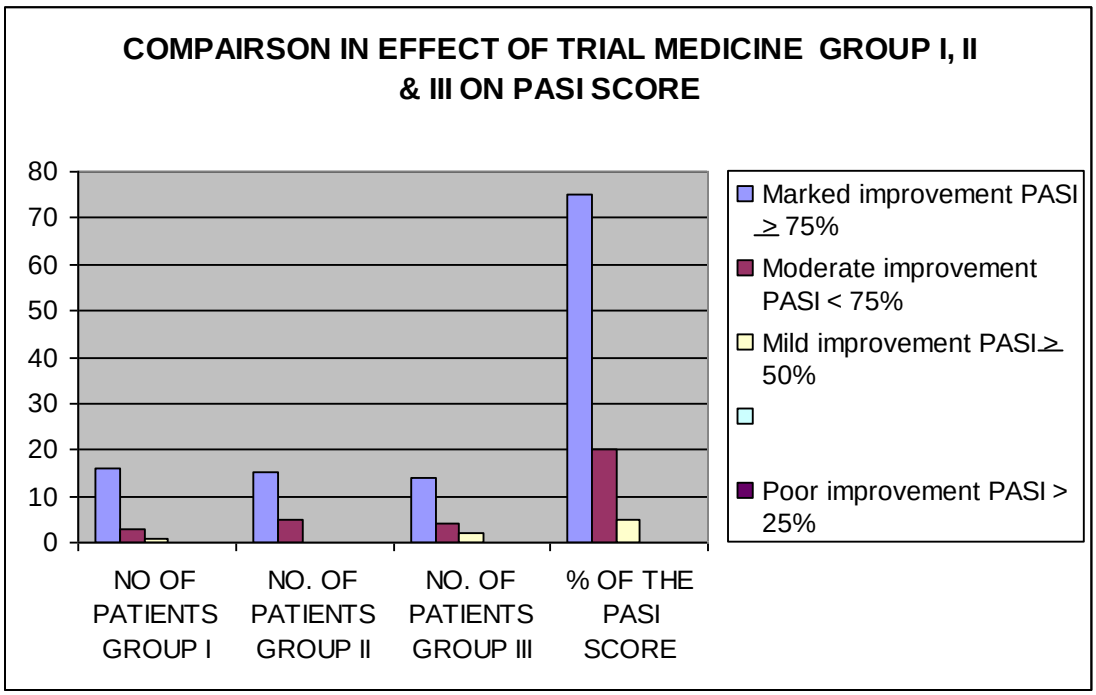
OBSERVATION:

Among 60 patients treated in OPD, out of 20 patients given external drug &pranayamam, 14 out of 20 patients had marked improvement (80%), 4 out of 20 patients had moderate improvement (15%), 2 out of 20 patients had mild improvement (5%).

COMPARISON IN EFFECT OF TRIAL MEDICINE

GROUP I, II & III ON PASI SCORE

S. NO.	EFFECT OF TRIAL MEDICINE	NO OF PATIENTS GROUP I	NO. OF PATIENTS GROUP II	NO. OF PATIENTS GROUP III	% OF THE PASI SCORE
1.	Marked improvement PASI ≥ 75%	16	15	14	75
2.	Moderate improvement PASI < 75%	3	5	4	20
3.	Mild improvement PASI ≥ 50%	1	0	2	5
4.	Poor improvement PASI > 25%	0	0	0	0



OBSERVATION:

Among 60 patients treated in OPD, 45 patients had marked improvement (75%), 12 patients had moderate improvement (20%), 3 patients had mild improvement (5%).

6. DISCUSSION

Thadippu Perunoi (psoriasis) is a chronic, inflammatory and proliferative skin disease with scaling and itching. Thadippu Perunoi is non-contagious disease, erythematous, silvery scales are characteristic social stigma. It can leads to discrimination, making a negative remarks about mental illness, stress, etc.

The trail drugs were prepared by the Author in the Gunapadam practical laboratory of Government Siddha Medical Collage, after getting proper authentication of raw drugs from the Medicinal Botany Department under the supervision of the members of the teaching faculty and guided by the Head of the Department of Sirappu Maruthuvam of the Government Siddha Medical College, Chennai-106.

In clinical study, 60 patients were selected, 20 patients were treated internal medicine, external oil and Pranayamam,20 patients were treated with internal medicine and external oil ,20 patients were treated with external oil and Pranayamam. Patients were treated in the out-patient department of Sirappu Maruthuvam

TRAIL DRUGS:

INTERNAL MEDICINE: Swarna Pushpa Rasa Chendhuram

EXTERNAL MEDICINE: Vettiver Thylam

Pranayamam

Based on various criteria, the data were collected and tabulated . The criteria were distribution of age, gender, occupation, family history, diet, clinical manifestations and assessment of the improvement in the prognosis of the disease with trail drugs.

1. AGE DISTRIBUTION :

Among 60 cases, high age incidence (33.3%) is Between 41 – 50yr, low age incidence (18.3%) is Between 51 – 60yr. Thadippu Perunoi can appear at birth as well as very old age. In this present study, considerable numbers of patients were reported between the age of 41-50yrs among study sample.

2. GENDER DISTRIBUTION :

Among 60 patients, 34 patients (57%) were male, 26patients (43%) were Female. Generally Thadippu Perunoi occurs with almost equal frequency in males and females, but a slightly more number of female cases were reported.

3. OCCUPATIONAL DISTRIBUTION :

Among 60 patients, 15 Out of patients were tailor (25%), because due to mechanical stress.

4. **FAMILY HISTORY:**

Among 60 patients only 18 patients (30%) were having positive family history.

5. SOCIO ECONOMIC STATUS:

Among 60 patients 37 patients were low income group (62%), 17 patients were middle Income group (28%), 6 patients were higher income group (10%).

6. DIET:

Among 60 patients, 45 patients were non vegetarian (75%), 15 patients were vegetarian (25%).

7. TRIGERRING FACTORS:

Among 60 patients, 25 patients were unknown origin (41.6%), 8 patients were non vegetarian (13.4%),10 patients due to had alcohol (16.6%), 5 patients due to infection (8.4%), 5 patients due to had smoking as a factor (8.4%), 4 patients were skin injury (6.6%), 2 patients were Reaction to certain drug (3.4%), 1 patients were in Psycho somatic origin (1.6%) .

8.CLINICAL FEATURES:

Among 60 patients have Erythematous patches with white silvery scales and Auspitz sign, Itching, Koebner’s phenomenon as their predominant symptoms in BT, but after treatment symptoms is fully reduced, nail and joint involvement mildly present.

9.CLINICAL IMPROVEMENT IN WEAK BASED ON PASI SCORE

The clinical efficacy of SPRC was apparent from the PASI score at weak, Among the 60 patients,3 patients (5%) had symptoms reduction in 3 weeks, 3 patients (5%) had symptoms reduction in 4 weeks, 10 patients (16.6%) had symptoms reduction in 5 weeks, 23 patients (38.4%) had symptoms reduction in 6 weeks, 21 patients (35%) had symptoms reduction in 7 weeks were noticed per week.

10. CLINICAL IMPROVEMENT BASED ON PASI SCORE PATIENT TREATED WITH INTERNAL& EXTERNAL MEDICINE &PRANAYAMAM

Among 60 patients treated in OPD, out of 20 patients given internal drug, external Drug & Pranayamam, 16 out of 20 patients had marked improvement (80%), 3 out of 20 patients had moderate improvement (15%), 1 out of 20 patients had mild improvement (5%).

11. CLINICAL IMPROVEMENT BASED ON PASI SCORE PATIENT TREATED WITH INTERNAL& EXTERNAL MEDICINE

Among 60 patients treated in OPD, out of 20 patients given internal drug, external drug, 15out of 20 patients had marked improvement (75%), 5 out of 20 patients had moderate improvement (25%).

12. CLINICAL IMPROVEMENT BASED ON PASI SCORE PATIENT TREATED WITH EXTERNAL MEDICINE & PRANAYAMAM

Among 60 patients treated in OPD, out of 20 patients given external drug & Pranayamam, 14out of 20 patients had marked improvement (80%), 4 out of 20 patients had moderate improvement (15%), 2 out of 20 patients had mild improvement (5%).

13. STATISTICAL RESULTS

- Since the p value is significant in all clinical features. So there is significant reducing of clinical features among the patients for the treatment of psoriasis. Hence it is concluded that the treatment was effective and significant.

- Since the P value is highly significant (<0.001). So there is significant reducing of PASI Score among the patients for the treatment (internal medicine, external medicine & Pranayamam) of Thadippu Perunoi (psoriasis).Hence it is concluded that the treatment was effective and significant.

- Since the P value is highly significant (<0.001). So there is significant reducing of PASI Score among the patients for the treatment (internal medicine & external medicine) of Thadippu Perunoi (psoriasis).Hence it is concluded that the treatment was effective and significant.

- Since the P value is highly significant (<0.001). So there is significant reducing of PASI Score among the patients for the treatment (external medicine & Pranayamam) of Thadippu Perunoi (Psoriasis).Hence it is concluded that the treatment was effective and significant.

The outcome of the study was clinically observed by PASI Score. Which showed encouraging results of marked improvement in 45 patients (75%), moderate improvement in 12 patients (20%), and mild improvement in 3 patients (5%).

MARKED IMPROVEMENT - 75%

MODERATE IMPROVEMENT - 20%

MILD IMPROVEMENT - 5 %

7. SUMMARY

AN OPEN COMPARATIVE CLINICAL EVALUATION ON "THADIPPU PERUNOI" (PSORIASIS) WITH SIDDHA TRIAL DRUGS "SWARNA PUSHPA RASA CHENDHURAM" (INT), "VETTIVER THAILAM (EXT)'' AND "PRANAYAMAM" has been chosen for the dissertation work by the author**.**

- The aim of the study was to evaluate the safety and efficacy of Herbo metallic Siddha Drugs **"Swarna Pushpa Rasa Chendhuram" (Int), "Vettiver Thailam (Ext)'' and "Pranayamam"** in management of Thadippu Perunoi (Psoriasis).

- Literatures evidence have been collected from siddha and modern textbooks and also the drug review also said.

- Standared operative procedure for both trial drugs was standardized.

- Pre - clinical toxicity study was done for the trial drug **"Swarna Pushpa Rasa Chendhuram" (Int),** in using of female Wister albino rats. Toxicity study was carried out after getting proper permission in Institutional Animal Ethical Committee (IAEC).

- The study is conducted after the drug being screened by the screening committee and the trial is also approved by the Institutional Ethical Committee (IEC). The clinical trial also registered in Clinical Trial Registry of India (CTRI).

- Qualitative and Quantitative study on the trial drug such as Physico-chemical analysis, had been done, results are normal in range.

- Anti-Psoriatic activity of **"Swarna Pushpa Rasa Chendhuram" (Int),** was studied in Human Keratinocytes cell line (HaCaT) in vitro method**.**

- 60 Patients of both sex and in agegroupbetween 18-60 years were selected for this clinical trial.

- ❖ Among 60 patients were from OPD, 20 Patients were selected for treating with both trial drugs Internal, External & Pranayamam, 20 patients were treated with internal drug and external drug, 20 patients were treated with external drug & Pranayamam.

- ❖ All the details about this study and the trial drug SPRCconsent forms duly signed by them, separate proforma was maintained for each patients.

- ❖ Photos of the patient before and after treatment for the evidence of clinical improvement.

- ❖ Before and after treatment blood samples are collected for the laboratory investigation.

- ❖ The safety of the trial drug SWARNA PUSHPA RASA CHENDHURAM was assessed by comparing the safety parameters such as LFT AND RFT before and after treatment was taken.

- ❖ From the first day onwards SWARNA PUSHPA RASA CHENDHURAM, 65Mg twise daily was given internally and VETTIVER THYLAM - 100ml for external application & PRANAYAMAM given to the patients.

- ❖ Clinical improvement was assessed using of PASI SCORE.

- ➢ Among 60 patients, out of 20 patients given internal drug, external drug &pranayamam,16out of 20patients had marked improvement (80%),3 out of 20 patients had moderate improvement(15%) ,1 out of 20 patients had mild improvement (5%) out of 20 patients given internal drug, external drug,15out of 20patients had marked improvement (75%),5 out of 20 patients had moderate improvement (25%) out of 20 patients given external drug &pranayamam,14out of 20patients had marked improvement (80%),4out of 20 patients had moderate improvement(15%),2 out of 20 patients had mild improvement (5%).

- ❖ Finally statistical analysis was performed to assess the significance of theclinical trial.

- Since the p value is significant in all clinical features. So there is significant reducing of clinical features among the patients for the treatment of Thadippu Perunoi (psoriasis).Hence it is concluded that the treatment was effective and significant.

- Since the P value is highly significant (<0.001). So there is significant reducing of PASI Score among the patients for the treatment (internal medicine, external medicine & Pranayamam) of Thadippu Perunoi (psoriasis).Hence it is concluded that the treatment was effective and significant.
- Since the P value is highly significant (<0.001). So there is significant reducing of PASI Score among the patients for the treatment (internal medicine & external medicine) of Thadippu Perunoi (psoriasis).Hence it is concluded that the treatment was effective and significant.
- Since the P value is highly significant (<0.001). So there is significant reducing of PASI Score among the patients for the treatment (external medicine & Pranayamam) of Thadippu Perunoi (Psoriasis).Hence it is concluded that the treatment was effective and significant.

8. CONCLUSION

- Heavy metal analysis of Swarna Pushpa Rasa Chendhuram (SPRC) reveals that the drug does not contain any metals like lead, Cadmium, Arsenic and mercury.

- Acute and sub- acute toxicity study reveals that the trial drug Swarna Pushpa Rasa Chendhuram considered as safe.

- Anti-Psoriatic activity of Swarna Pushpa Rasa Chendhuram was studied in Human Keratinocytes cell line (**HaCaT**), LPS treatment produced effects similar to psoriasis as reported and the compound was effective in limiting the increased proliferation in HaCaT cells. 100ug/ml reduced the cell viability to 14.9% which is significant.

- Among 60 patients treated in OPD, 45 patients had marked improvement (75%), 12 patients had moderate improvement (20%), 3 patients had mild improvement (5%). Result of the study was concluded by reducing PASI SCORE.

- Pranayamam may have treating ability of psoriasis by reducing stress. And it is along with the Siddha trial drugs was very effective in overall improvements were good. And itching and scaling was reduced in group I and III are very effective when comparing to group I.

- The LFT & RFT before and after treatment does not show any significant change in psoriasis cases, hence it is safe in human trial. In my clinical trial during the course of the trial were no adverse effect or unwanted drug reactions in GIT, RS, CVS & excretory system.

- The results of the clinical trial indicate that the trial drug Swarna Pushpa Rasa Chendhuram (Internal) Vettiver Thylam (External) and Pranayamam are clinically more effective in **THADIPPU PERUNOI (PSORIASIS)** Patients.

BIBLIOGRAPHY

1. Dr.Thiyagarajan, Sirappu Maruthuvam, Indian Medicine and Homeopathy, Second Edition, 2008.

2. R.C.Mohan, Thirumalar Karukkadai Vaithiyam - 600, Thamarai Noolagam, Third Edition - 2012.

3. Dr.M.Shanmuga Velu, Siddha Maruthuvam, Noinadal, Noi Muthal Nadal Thirattu Part - 1, Indian Medicine and Homeopathy, 2009.

4. Dr.S.Venkataraman Thanvanthiri Vaithiyam 2nd Volume, Thamarai Noolagam, 1990.

5. Ramachandran, Agathiyar Kanma Kandam Kowmathi Nool, Tamarai Noolagam, Second Edition - 2009.

6. N.Kuppusamy Muthaliyar Siddha Maruthuvam Pothu Indian Medicine & Homeopathy 2007.

7. Dr.K.S.Uthamarayan, Siddhar Aruvai Maruthuvam, Indian Medicine & Homeopathy, 2009.

8. T.V.Sambasivam Pillai, Tamil - English Dictionary of Medicine Volume - 2, Indian Medicine & Homeopathy 1991.

9. Yugi Munivar Vaithiya Sinthamani 800, Tamarai Noolagam, 2012.

10. Tamil Valarchi Kazhagam, Siddha Medicine Vol - 3, Special Areas, 2015.

11. P.N.Behl. A Aggarwal Govind Srivastara, Practice of Dermatology, CBS Publishers, Third Edition, 2009.

12. Davidson's Principle & Practice of Medicine 20th Edition, Elsevier Publisher, 2010.

13. K.Shanmuga Lingam and Prema Shanmuga Lingam, Essentials of Medical Physiology Jaypee Publishers, 2006.

14. Nail S.Sadick, MD, Medical Clinics of North America (National Psoriasis Foundation), Volume 93, Issue 6 and November 2009.

15. Neena Khana, Illustrated Synopsis of Dermatology & Sexually transmitted disease fifth edition page no. 44, 2016.

16. Dr.R.Thiyagarajan Gunapadam Thathu Seeva Vaguppu, Part - 2, Indian Medicine and Hoemopathy 1968.

17. Principles of in Organic Chemistry Puri Sharma, Kalia Mile Stone Publishers 2007 - 2008.

18. Kannusamy Pillai Sikicha Rathina Deepam, Page - 240.

19. Aathnaraccha Mirtha Vaithiya Saara Sangragam Part - 1, Page No.527.

20. Murugesan Mudaliar, Gunapadam Mooligai Vazhuppu, Indian Medicine & Homeopathy.

21. Shanmuga Velu, Noi Nadal Part - 1, Indian Medicine & Homeopathy.

22. Dr.Nagarathane, Yoga on Hypertension & Heart Disease, Swami Vivekara Yoga Prakeshana, Page No.100.

23. Health Impacts of Yoga and Pranayamam.

24. Organization for Economic Co-operative & Development Guidelines 423.

25. Organization for Economic Co-operative & Development Guidelines 407.

26. Evaluatoin of anti - oxidant activity fruits extracts pharmtech research. American journal of pharmtech research, shristiBadhani Amrita Kainth[1,] kabra, Bharat parashar[1s].

27. In vitro antioxidant activity of Vetiveriazizanioides root extract. *Varadharajan Subhadradevi, Kuppusamy Asokkumar, Muthuswamy Umamaheswari, Andichettiarhirumalasia Sivashanmugam, Rajakannu Sankaranan.*

28. Antimicrobial and antioxidant activities of methanol extract roots of glycyrrhizaglabra and hplc analysis. P.k.p. gaitrychopraa*, binda d. sarafa, farhininama and sujas.deoa a department of chemistry, institute of science, civil lines, r.t. road, nagpur, india.

29. Anticancer activities of *nigella sativa* (black cumin) Mdhttp://www.ncbi.nlm.nih.gov/pubmed/?term=Khan%20A%5bauth%5dAsaduz zaman Khan,[1] Han-chun Chen[1] Mousumi Tania,[1] and Dian-zheng Zhang[1]

30. Antiproliferative properties of methanolic extract of nigella sativa, MDA-MB-231 Cancer Cell Line Ahmad Dilshad1*, Omalkhair Abulkhair2 Dalalnemenqani3, Waleed Tamimi1

31. Effect of Extracts of Terminaliachebula on Proliferation of Keratinocytes and Fibroblasts Cells: An Alternative Approach for Wound Healing Dolly Singh,[1,2] Deepti Singh,[1,2] Soon Mo Choi,[1] Sun Mi Zo,[1] Rakesh Mohan Painuli,[3] Sung Won Kwon,[4] and Sung.

32. Antioxidant efficacy of fruit extracts of *Terminaliachebula* prepared by sequential method using TA-102 strain of *Salmonella typhimurium*. *Harpreet Walia, JasmitKaur, Saroj Arora.*

33. Antibacterial activity of oils of cedrusdeodara and ricinuscommunis .1*Saifullah, 1Naveeda Bibi, 1Malik Jan, 1Waqar Ahmad, 1Zeeshan Niaz, 2Naveed Akhtar, 2Kausar Saeed.

GOVERNMENT SIDDHA MEDICAL COLLEGE

ARIGNAR ANNA GOVERNMENT HOSPITAL OF INDIAN MEDICINE

CHENNAI – 600 106

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM

PRINICIPAL INVESTIGATOR: Dr. A.Anitha REG NO:

AN OPEN COMPARATIVE CLINICAL EVALUATION ON "THADIPPU PERUNOI" (PSORIASIS) WITH SIDDHA TRIAL DRUGS "SWARNA PUSHPA RASA CHENDHURAM" (INT), "VETTIVER THAILAM (EXT)" AND "PRANAYAMAM".

FORM I - SCREENING & SELECTION PROFORMA

1. OP NO : ……

2. NAME : …….

3. AGE : ……

4. GENDER : …….....

5. OCCUPATION : ……..

6. INCOME : ……

7. ADDRESS : …….
…….
…….
…….....

8. CONTACT NO : ……

INCLUSION CRITERIA

- Age :15-60 years Yes / No
- Sex : Both male and female Yes / No
- Patches with Scaling Yes / No
- Auspitz sign + Yes/ No
- Koebner's phenomenon + Yes/No
- Patients Willing to fill consent form Yes/ No
- Patients willing to take photograph before& after treatment Yes / No

EXCLUSION CRITERIA:

- HISTORY OFAlcohol
- Narcotic addicts
- Anti –malarial drugs
- Cardiac disease
- Leprosy
- Peptic ulcer
- SLE, Progressive systemic sclerosis
- Evidences of secondary infection in the lesions
- Pregnancy and lactation
- HIV
- Syphilis
- Long term intake of steroids

ADMITTED TO TRIAL:

YES NO

If yes, OPD NO

Date:

Station:

Signature of the Investigator: **Signature of the Guide:**

GOVERNMENT SIDDHA MEDICAL COLLEGE

ARIGNAR ANNA GOVERNMENT HOSPITAL OF INDIAN MEDICINE

CHENNAI – 600 106

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM

PRINICIPALINVESTIGATOR: Dr.A.Anitha **REG NO:**

AN OPEN COMPARATIVE CLINICAL EVALUATION ON "THADIPPU PERUNOI" (PSORIASIS) WITH SIDDHA TRIAL DRUGS "SWARNA PUSHPA RASA CHENDHURAM" (INT), "VETTIVER THAILAM (EXT)" AND "PRANAYAMAM".

FORM II - HISTORY TAKING PROFORMA ON ENROLLMENT

1.SERIAL NO OF THE CASE: ……

2.OP NO: .....

3. NAME: …… 4.AGE: …… 5.GENDER: .....

6. MARITAL STATUS 1.Married ☐ 2.Unmarried ☐

7. COMPLAINTS & DURATION:

8. CHIEF COMPLAINTS WITH DURATION

		Present	Absent	Duration (indays)
1.Itching	**:**			
2. Dryness of the skin	**:**			
3. Roughness	**:**			
4. Circular erythema	**:**			

5. Exfoliation :

6. Hyper Pigmentation :

7. Hypo-Pigmentation :

8. Maceration :

9. Pin point bleeding
After removal of skin :

10. Papule/Pustule/Vesicle :

11. Fissures :

9. HISTORY OF PRESENT ILLNESS

1. **Onset of disease** : Acute Insidious
2. **Duration of disease** :
3. **Treatment given so far** : Ayurvedic medicine Modern Medicine

Unani
Homeopathy

10. PERSONAL HISTORY:

PERSONAL HABITS	**YES**	**NO**	**IF YES SPECIFY DURATION**
Habits of smoking			
Habit of Tobacco Chewing			
Habit of Alcohol			
Any Habit of Narcotic Drug Addiction			

11. DRUG HISTORY:

12. FAMILY HISTORY:

Whether this problem runs in family?

1. Yes 2.No

If yes, mention the relationship of affected person(s) ----------

History of previous investigations if any ----------

13. DIETARY STYLE:

1. Pure vegetarian ☐
2. Non-vegetarian ☐

14. BOWEL HABITS & MICTURITION:

15. MENSTURAL AND OBSTETRIC HISTORY:

16. HISTORY OF PREVIOUS ILLNESS/PELVIC SURGERY

Date: Signature of the guide

Station:

Signature of the Investigator

GOVERNMENT SIDDHA MEDICAL COLLEGE

ARIGNAR ANNA GOVERNMENT HOSPITAL OF INDIAN MEDICINE

CHENNAI – 600 106

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM

PRINICIPAL INVESTIGATOR: Dr. A.Anitha **REG NO:**

AN OPEN COMPARATIVE CLINICAL EVALUATION ON "THADIPPU PERUNOI" (PSORIASIS) WITH SIDDHA TRIAL DRUGS "SWARNA PUSHPA RASA CHENDHURAM" (INT), "VETTIVER THAILAM (EXT)" AND "PRANAYAMAM".

FORM III - CLINICAL ASSESSMENT ON ENROLLMENT PROFOMA

1. OP NO:----------

2. NAME: ---------- **3. AGE: ---------** **4.GENDER: ----------**

5. DATE OF BIRTH: ☐☐ ☐☐ ☐☐☐☐

D M Y E A R

6. DATE OF INITIAL ASSESSMENT: ----------

SIDDHA SYSTEM OF EXAMINATION:

1. THEGI (BODY CONSTITUTION):

1. Vatha udal ☐
2. Pitha udal ☐
3. Kaba udal ☐
4. Thontha udal ☐

2. NILAM (LAND WHERE THE PATIENT LIVED MOST):

1. Kurinji ☐
2. Mullai ☐
3. Marutham ☐
4. Neithal ☐
5. Paalai ☐

3. KAALAM:

1. Kaar kaalam (Aavani-Puratasi) ☐
2. Koothir kaalam (Ippasi-Kaarthigai) ☐
3. Munpani kaalam (Maargazhi-Tai) ☐
4. Pinpani kaalam (Maasi-Panguni) ☐
5. Ilavenil kaalam (Chithirai-Vaigasi) ☐
6. Muthuvenil kaalam (Aani-Aadi) ☐

4. GUNAM:

1. Sathuvam ☐
2. Rasatham ☐
3. Thamasam ☐

5. PORIPULANGAL (SENSORY ORGANS):

	Normal	**Affected**
1. Mei	☐	☐
2. Vaai (Naaku)	☐	☐
3. Kan	☐	☐
4. Mookku	☐	☐
5. Sevi	☐	☐

6. KANMENDRIYAM (MOTOR ORGANS) :

	Normal	Affected
1. Vaai	☐	☐
2. Kaal	☐	☐
3. Kai	☐	☐
4. Eruvaai	☐	☐
5. Karuvaai	☐	☐

7. KOSANGAL (SHEATH):

	Normal	Affected
1. Annamaya kosam	☐	☐
2. Pranamaya kosam	☐	☐
3. Manomaya kosam	☐	☐
4. Vignanamaya kosam	☐	☐
5. Anandhamaya kosam	☐	☐

8. UYIR THATHUKKAL (THREE HUMOURS):

8a.VALI:	**Normal**	**Affected**
1. Praanan	☐	☐
2. Abaanan	☐	☐
3. Viyaanan	☐	☐
4. Uthaanan	☐	☐

5. Samaanan ☐ ☐

.....

6. Naagan ☐ ☐

.....

7. Koorman ☐ ☐

.....

8. Kirukaran ☐ ☐

.....

9. Devathathan ☐ ☐

.....

10. Dhananjayan ☐ ☐.

.....

8b. AZHAL: Normal Affected

1. Analam ☐ ☐

.....

2. Ranjagam ☐ ☐

.....

3. Saathagam ☐ ☐

.....

4. Aalosagam ☐ ☐

.....

5. Praasagam ☐ ☐

.....

8c.IYAM: Normal Affected

1. Avalambagam ☐ ☐

.....

2. Kilethagam ☐ ☐

.....

3. Pothagam ☐ ☐

.....

4. Tharpagam ☐ ☐

.....

5. Santhigam ☐ ☐

.....

9. EN VAGAI THERVU (EIGHT FOLDS OF EXAMINATION):

1.Naadi: …….....

2.Parisam: …….....

3.Naa : .....…….....

4.Niram : .....…….....

5.Mozhi: .....…….....

6.Vizhi : .....

7.Malam : .....

8. Moothiram: …….

8a.Neerkuri:

Niram : 1.Whitish ☐ 2. Yellowish ☐

3.Straw coloured ☐ 4. Crystal clear ☐

Edai: 1.Present ☐ 2.Absent ☐

Manam : 1.Nil ☐ 2.Reduced ☐ 3. Increased ☐

Nurai: 1. Normal ☐ 2. Increased ☐ 3. Decreased ☐

Enjal:

8b: Neerkuri (Oil –in urine sign):

Vatha Neer ☐ Pitha Neer ☐ Kaba Neer ☐

10. SEVEN UDAL THAATHUKKAL (SEVEN SOMATIC COMPONENTS):

NormalAffected

1. Saaram ☐ ☐

.....

2. Senneer ☐ ☐

.....

3. Oon ☐ ☐

.....

4. Kozhuppu ☐ ☐

..... ☐

5. Enbu ☐

☐

..... ☐

6.Moolai

.....

7. Sukkilam / Suronitham ☐ ☐

.....

GENERAL EXAMINATION:

1. Body weight [Kg] :
2. Height [cm] :
3. Body Temperature [F] :
4. Blood Pressure (mmHg) :
5. Pulse Rate /min. :
6. Heart Rate / min. :
7. Respiratory Rate /min. :

		Yes	**No**
8. Pallor	:	☐	☐
9. Jaundice	:	☐	☐
10. Clubbing	:	☐	☐
11. Cyanosis	:	☐	☐
12. Pedal Oedema	:	☐	☐
13. Lymphadenopathy	:	☐	☐
14. Jugular venous pulsation	:	☐	☐

VITAL ORGAN EXAMINATION:

	Normal	**Abnormal**
1. Heart	☐	☐
2. Lungs	☐	☐
3. Brain	☐	☐

4. Liver ☐ ☐
5. Kidney ☐ ☐
6. Spleen ☐ ☐
7. Stomach ☐ ☐

SYSTEMIC EXAMINATION:

	Normal	Abnormal
1. Cardio-vascular system	☐	☐
2. Respiratory system	☐	☐
3. Gastro intestinal system	☐	☐
4. Central nervous system	☐	☐
5. Genital urinary system	☐	☐
6. Endocrine system	☐	☐

11. CLINICAL EXAMINATION:

CLINICAL EXAMINATION OF SKIN

1.Site: ----------

---

2. Colour: Normal ☐ Reddish ☐ Black ☐ Greyish ☐

3. Shape: Irregular ☐ Coin shape ☐ dispersed ☐

4. Itching: No ☐ Mild ☐ Moderate ☐ Severe ☐

5. Scaling: Mild ☐ Moderate ☐ Severe ☐

6. Erythema: Present ☐ Absent ☐

7. Bleeding: Present ☐ Absent ☐

8. Crusting: Present ☐ Absent ☐

9. Lichenification: Present ☐ Absent ☐

10. Oozing: No ☐ Mild ☐ Moderate ☐ severe ☐

11. Auspitz sign: Present ☐ Absent ☐

12. Koebner's phenomenon: Present ☐ Absent ☐

13. Candle grease sign: Present ☐ Absent ☐

	YES	NO
14. Ulcération:	☐	☐
15. Macule:	☐	☐
16. Papule:	☐	☐
17. Pustule:	☐	☐
18. Blister:	☐	☐
19. Vesicle:	☐	☐

20. Pigmentation: Normal ☐ Hypo ☐ Hyper ☐

EXAMINATION OF NAILS:

1. Pitting: Present ☐ Absent ☐

2 Thickening: Present ☐ Absent ☐

3. Collection of Hyperkeratotic debris: Present ☐ Absent ☐

4. Separation of distal portion of nail: Present ☐ Absent ☐

EXAMINATION OF JOINTS:

	YES	NO
Joint Involvement	☐	☐

PASI SCORE ASSESSMENT

Pasi score	0 day	7th	14th	21st	28th	35th	42nd	49th

PSORIASIS AREA AND SEVERITY INDEX (PASI)

E – Erythema D – Desquamation

I – Infiltration A – Area

$PASI=0.1(E_H+I_H+D_H)\,A_H+0.2\,(E_U+I_U+D_U)\,A_U+0.3\,(E_T+I_T+D_T)\,A_T+0.4\,(E_L+I_L+D_L)A_L$

Erythema/ Infiltration/Desquamation scoring

0 - Nil

1- Mild

2- Moderate

3-Severe

4-Very high

Area Scoring

0-Nil

1-Less than 10%

2- 11%-30%

3-31%-50%

4-51%-70%

5-71%-90%

6-91%-100%

PASI Calculation

Patient name					
Date					
Plaque Characteristic	**Rating Score**	**Body region and weighting factor**			
		Head	**Upper Limbs**	**Trunk**	**Lower Limbs**
Erythema	**0 = None**				
Thickness	**1 = Slight**				
	2 = Moderate				
Scaling	**3 = Severe**				
	4 = Very Severe				
Totals					
Weighting Factor		**x 0.1**	**x 0.2**	**x 0.3**	**x 0.4**
Surface area totals					
Degree of involvement as % for each body region affected (score each region between 0 and 6)	**0 = None**				
	1 = 1-10%				
	2 = 11-30%				
	3 = 31-50%				
	4 = 51-70%				
	5 = 71-90%				
	6 = 91-100%				
	Surface area totals x % involvement totals Sum Scores above =				

REF: PSORIASIS GLOBAL ASSSESSMENT LATTICE SYSTEM PHYSICIAN GLOBAL ASSESSMENT

Date :

Station: **Signature of the guide:**

Signature of the Investigator:

GOVERNMENT SIDDHA MEDICAL COLLEGE

ARIGNAR ANNA GOVERNMENT HOSPITAL OF INDIAN MEDICINE

CHENNAI – 600 106

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM

PRINICIPAL INVESTIGATOR: Dr. A. Anitha REG NO:

AN OPEN COMPARATIVE CLINICAL EVALUATION ON "THADIPPU PERUNOI" (PSORIASIS) WITH SIDDHA TRIAL DRUGS "SWARNA PUSHPA RASA CHENDHURAM" (INT), "VETTIVER THAILAM (EXT)" AND "PRANAYAMAM".

FORM IV: LABORATORY INVESTIGATIONS PROFORMA

1. SERIAL NO OF THE CASE: ……

2.OP NO: .....

3. NAME: …… 4.AGE: …… 5.GENDER: .....

A) BLOOD INVESTIGATIONS

BLOOD INVESTIGATIONS		NORMAL VALUES	BEFORE TMT (WITH DATE)	AFTER TMT (WITH DATE)
HB(gm/dl)		M:12-15 W:11.5-14		
T.WBC (cells/cu.mm)		4000-11000		
DIFFERENTIAL COUNT (%)	Polymorphs	40-75		
	Lymphocytes	20-40		
	Monocytes	2-10		
	Eosinophils	1-6		
	Basophils	0-1		
T.RBC(million cells/cu.mm)		M:4.0-5.5 W:3.5-4.5		
ESR(mm/hour)	½ hr.	M:6-12 W:7-18		
	1 hr.			

Blood Investigations		Normal Values	Before TMT(WITH DATE)	After TMT (WITH DATE)
Blood glucose (mg/dl)	Fasting	70-110		
	PP	80-140		
	Random	80-120		
RFT (mg/dl)	Blood urea	16-50		
	Serum creatinine	0.6-1.2		
LFT (mg/dl)	Total bilirubin	0.2-1.2		
	Direct bilirubin	0.1-1.2		
	Indirect bilirubin	0.2-0.7		
	SGOT	0-40		
	SGPT	0-35		
	Alkaline phosphatase	80-290		

B) URINE INVESTIGATIONS:

URINE INVESTIGATIONS	BEFORE TREATMENT	AFTER TREATMENT
Albumin		
Sugar		
Deposits		

Date:

Station:

Signature of the Guide

Signature of the Investigator

GOVERNMENT SIDDHA MEDICAL COLLEGE

ARIGNAR ANNA GOVERNMENT HOSPITAL OF INDIAN MEDICINE

CHENNAI – 600 106

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM

PRINICIPAL INVESTIGATOR: Dr.A. Anitha **REG NO:**

AN OPEN COMPARATIVE CLINICAL EVALUATION ON "THADIPPU PERUNOI" (PSORIASIS) WITH SIDDHA TRIAL DRUGS "SWARNA PUSHPA RASA CHENDHURAM" (INT), "VETTIVER THAILAM (EXT)" AND "PRANAYAMAM".

FORM V: INFORMED CONSENT FORM

"I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction.

I consent voluntarily to participate in this study and understand that I have the right to withdraw from the study at any time without in any way it affecting my further medical care".

"I have received a copy of the information sheet/consent form".

Date:

Signature of the participant:

In case of illiterate participant

"I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely."

Date:

Signature of a witness Left thumb Impression of the Participant

(Selected by the participant bearing no connection with the survey team)

Date:

Station:

Signature of participant:

Signature of the Guide

Signature of the Investigator

«ÃÍ º¢ò¾ ÁÕòÐÅì ¸øæ¡¢,

«È¢»÷ « ñ ½¡ ÁÕòÐÅÁ¨É, ¦ºý¨É-106

தடிப்பு பெருநோய் §¿¡öì¸¡É º¢ò¾ ÁÕó¾¢ý **சொரியுடன்பரச செறதோல**,

வெடிவேர் தைலம மறறும பராணயாமம

À¡¢¸¡ôÒò ¾¢È¨É ɾ¸ ñ ¼Ê¢ÔõÁÕ¸ÐÁ ¬ºÁ¢ü¸¡É ¾¸Åø ÁÈÅõ.

´ôÒ¾ø ÀÊÅõ

¬öÅ¡ÇÃ¡ø º¡ýÈÇ¢ì¸ôÀð¼Ð

¿¡ý þó¾ ¬ö¨Å ÌÈ¢ò¾ «¨ÉòÐ Å¢ÀÃí¸¨ÇÔõ §¿¡Â¡Ç¢ì Ì ÒÃ¢Õõ Å¨¸Â¢ø ±Îò¨Ãò§¾ý ±É ¯Ú¾ÂÇ¢ì¸¢§ÈÝ.

§¾¾¢: ¨¸¦Â¡ôÀõ:

þ¼õ: ¦ÀÂ÷ :

§¿¡Â¡Ç¢Â¢ý ´ôÒ¾ø

±ýÉ¢¼õ þó¾ ÁÕòÐÅ ¬öÅ¢ý ¸¡Ã½ò¨¾Ôõ, ÁÕó¾¢ý ¾ý¨Á ÁüÚõ ÁÕòÐÅ ÅÆ¢Ó¨È ÀüÈ¢Ôõ, ¦¾¡¼÷óÐ ±ÉÐ ¯¼ø þÂì¸ò¨¾ ¸ñ¸¡½ì¸×õ, «¾¨É À¡Ð¸¡ì¸×õ ÀÂýÀÎõ ÁÕòÐÅ ¬ö×ìÜ¼ ÀÃ§º¡¾¨É¸û ÀüÈ¢ ¾Õô¾ «Çì¸ìõ Å¨¸Â¢ø ¬ö× ÁÕòÐÅÃ¡ø Å¢Çì¸¢ì ÜÈôÀð¼Ð.

¿¡ý þó¾ ÁÕòÐÅ ¬öÅ¢ý §À¡Ð, ¸¡Ã½õ ±Ð×õ ÜÈ¡Áø, ±ô¦À¡ØÐ §Å ñ ÎÁ¡É¡Öõ þó¾ ¬öÅ¢Ä¢ÕóÐ ±ý¨É Å¢Î Å¢òÐ ¦¸¡ûÙõ ¯Ã¢¨Á¨Â ¦¾Ã¢ó¾¢ÕìÌ¸¢ý§ÈÝ. ¿¡ý ±ýÛ¨¼Â Í¾ó¾¢ÃÁ¡¸ §¾÷× ¦ºöÔõ ¯Ã¢¨Á¨Âì ¦¸¡ñÎ **தடிப்பு பெருநோய்** §¿¡öì¸¡É **சொரியுடன் புண்பட ரச செறதோல,வெடிவேர் தைலம மறறும பராணயாமம ஆகியவறறின்** ÀÃ¸¡Â¢ô0ò ¾¢È¨Eì¸ ñ¼È¢Õõ ÁOòÐÅ ¬öÅ¢üI ±ý¨É ðÀÎò¾ ´ôÒ¾ø «Çì¸¢§ÈÝ.

இயமருநதுகளினால ஏறபடுய பகவளைவுக. குறிதுய வவரகபபடுளது

§¾¾¢: ¨¸¦Â¡ôÀõ:

þ¼õ: ¦ÀÂ÷ :

§¾¾¢: º¡ð º¢ì¸¡Ã÷ ¨¸¦Â¡ôÀõ:

þ¼õ: ¦ÀÂ÷ :

¯È×Ó¨È :

GOVERNMENT SIDDHA MEDICAL COLLEGE

ARIGNAR ANNA GOVERNMENT HOSPITAL OF INDIAN MEDICINE

CHENNAI – 600 106

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM

PRINICIPAL INVESTIGATOR: Dr. A.Anitha **REG NO:**

AN OPEN COMPARATIVE CLINICAL EVALUATION ON "THADIPPU PERUNOI" (PSORIASIS) WITH SIDDHA TRIAL DRUGS "SWARNA PUSHPA RASA CHENDHURAM" (INT), "VETTIVER THAILAM (EXT)" AND "PRANAYAMAM".

FORM VI - WITHDRAWAL FORM

SERIAL NO OF THE CASE: **OP NO:**

NAME: **AGE/GENDER:**

DATE OF TRIAL COMMENCEMENT:

DATE OF WITHDRAWAL FROM TRIAL:

REASONS FOR WITHDRAWAL:

Long absence at reporting:	Yes/ No
Irregular treatment:	Yes/ No
Shift of locality:	Yes/No
Increase in severity of symptoms:	Yes/No
Development of severe adverse drug reactions:	Yes/No
Development of adverse event:	Yes/No

Date:

Station:

Signature of the Investigator: Signature of the Guide:

GOVERNMENT SIDDHA MEDICAL COLLEGE

ARIGNAR ANNA GOVERNMENT HOSPITAL OF INDIAN MEDICINE

CHENNAI – 600 106

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM

PRINICIPAL INVESTIGATOR: Dr. A.Anitha **REG NO:**

AN OPEN COMPARATIVE CLINICAL EVALUATION ON "THADIPPU PERUNOI" (PSORIASIS) WITH SIDDHA TRIAL DRUGS "SWARNA PUSHPA RASA CHENDHURAM" (INT), "VETTIVER THAILAM (EXT)" AND "PRANAYAMAM".

FORM VII- (DRUG COMPLIANCE FORM)

STUDYNO: OP NO:

NAME: **AGE/GENDER:**

DRUG NAME: SWARNA PUSHPA RASA CHENTHURAM

Day	Date	Morning	Evening	Day	Date	Morning	Evening
Day 1				Day25			
Day2				Day26			
Day3				Day27			
Day4				Day28			
Day5				Day29			
Day6				Day30			
Day7				Day31			
Day8				Day32			
Day9				Day33			
Day10				Day34			
Day11				Day35			
Day12				Day36			
Day13				Day37			
Day14				Day38			
Day15				Day39			

Day16				Day40			
Day17				Day41			
Day18				Day42			
Day19				Day43			
Day20				Day44			
Day21				Day45			
Day22				Day46			
Day23				Day47			
Day24				Day48			

Date :

Station:

Signature of the Guide:

Signature of the Investigator:

GOVERNMENT SIDDHA MEDICAL COLLEGE

ARIGNAR ANNA GOVERNMENT HOSPITAL OF INDIAN MEDICINE

CHENNAI – 600 106

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM

FORM VIII – PATIENT INFORMATION SHEET

Name of Co- Investigator: A. Anitha

Name of the college: Govt. Siddha Medical College

Arumbakkam, Chennai-106.

INFORMATION SHEET FOR PATIENTS PARTICIPATING IN THE OPEN CLINICAL TRIAL.

I, A.Anitha studying M.D (Siddha) at Govt Siddha Medical College, Chennai, is doing a clinical trial on "THADIPPU PERUNOI (PSORIASIS)". It is becoming a most common disease, occurring throughout the world. In this regard, I am in need to ask you few questions. I will maintain confidentiality of your comments and data obtained. There will be no risk of disclosing your identity and no physical, psychological or professional risk is involved by taking part in this study. Taking part in this study is voluntary. No compensation will be paid to you for taking part in this study.

You can choose not to take part. You can choose not to answer a specific question. There is no specific benefit for you if you take part in the study. However, taking part in the study may be of benefit to the community, as it may help us to understand the problem of defaulters and potential solutions.

If you agree to be a participant in this study, you will be included in the study primarily by signing the consent form and then you will be given the internal medicine"Swarna Pushpa Rasa Chendhurum" (Internal drug) 130mg bid with honey for 48 days.

The information I am collecting in this study will remain between you and the Co- investigator (myself). I will ask you few questions through a questionnaire. I will not write your name on this form. I will use a code instead.

The questionnaire will take approximately 20 minutes of your time.

If you wish to find out more about this study before taking part, you can ask me all the questions you want or contact A.Anitha, PG Scholar cum Co- investigator of this study, attached to Govt. Siddha Medical College, Chennai-106. You can also contact the Member-secretary of Ethics committee, Govt Siddha Medical College, Chennai.

«ÃÍ º¢ò¾ ÁÕòÐÅì ¸øæ¡¢,

«È¢»÷ « ñ ½¡ ÁÕòÐÅÁ¨ É, ¦ºý ¨É-106

தடிப்பு பெருநோய் §¿¡öì¸¡É º¢ò¾ ÁÕó¾¢ý **சௌரணபுலபரச செறதுரய, வெடடிவேர தைலய மறறுய பாராணயாமய**

À¡¢¸¡ôÒò ¾¢È ÐÌ¸ñ ¼È¢ÔõÒ ÁÕòÐÁ ¬ò¢ü¸¡É ¾¸Àø ÀÊÅõ.

¬Ã¡öî º¢Â¡Ç÷ ¦ÀÂ÷: ÁÕòÐÅ÷. **அ.அ...தா**

¿¢ÚÅÉò¾¢ý ¦ÀÂ÷: «ÃÍ º¢ò¾ ÁÕòÐÅì¸øæ¡¢

«ÕõÀ¡ì¸õ,

¦ºý¨É-106

«ÃÍ º¢ò¾ ÁÕòÐÅì¸øæ¡¢Â¢ø Àð¼ §ÁüÀÊôÒ ÀÂ¢ýÚ ÅÕõ ¿¡ý ÁÕòÐÅ÷.**அ.அ...தா**, **தடிப்பு பெருநோய்** ±ýÛõ §¿¡Â¢ø ÁÕòÐÅ ¬Ã¡öî º¢Â¢ø ®ÎÀðÎû§Çý.

தடிப்பு பெருநோய் - **இது வடடவடிவமான படைகளை தோலில உ...டாகுய §¿¡ö ஆகுய, மேலுய அரபபு, சிவபபு, செதில்களா, உதிரல ஆகிய குறிகுண...ங்களை உ...டாகுய.**

þÐ ÀÃÅìÜÊÂ §¿¡ö «øÄ.

þó¾ ¬Ã¡öî º¢ºõÀó¾Á¡¸ º¢Ä§¸ûÅ¢¸¨ÇìÉ§¸ð¸×õ, §¾¨ÅÂ¡É ¬öÅ¸ô ÀÃ¢§º¡¾¨ÉìÌ ¾í¸¨Ç¯ðÀÎò¾×õ¯û§Çý.

þó¾ ¬Ã¡öî º¢ìÌ ¾¡í¸û Å¢ÕôÀò¾¢ý §À¢ø ¯ðÀÎõ Àðºò¾¢ø ¯ûÁÕó¾¡¸ **சௌரண புலப ரச செறதுரய**130 **மி**¸¢§¾É¢ø 2 §Å¨Ç(¸¡¨Ä, Á¡¨Ä) ¯½×ìÌ À¢ý 48 ¿¡ð¸û ¯ð¦¸¡ûÇ §Åñ Îõ. ¦ÅÇ¢ §¿¡Â¡Ç÷¸û 7 ¿¡ð¸ÙìÌ´ÕÓ¨ÈÁÕòÐÅÁ¨ÉìÌ ÅÃ§Åñ Îõ.

þó¾ ÁÕóÐ º¢ÈôÀ¡¸ **தடிப்பு பெருநோய்** §¿¡öì¸¡ «í¸¡¸Ã¢ì¸ôÀð¼ º¢ò¾ ÁÕòÐÅ á Ä¢ø ÜÈôÀðÎûÇÐ.

þó¾ ¬Ã¡öî º¢Â¢ø ¾í¸¨Ç «ÛÁ¾ò¾ À¢ÈÌ ¯í¸ÙìÌ Å¢ÕôÀõ þø¨Ä¦Â¢ø ±ô§À¡Ð §Åñ ÎÁ¡É¡Öõ ¬Ã¡öî º¢Â¢ø þÕóÐ விலகிக் ¦¸¡ûÇ ¯Ã¢¨Á¯ûÇÐ.

þó¾ ¬Ã¡öî º ºõÀó¾Á¡¸ §¿¡Â¢ý ¾ý¨Á ÀüÈ¢Ôõ ÁüÈ Å¢ÀÃí¸ÙìÌõ ¬Ã¡öî º¢Â¡ÇÃ¡É ÁÕòÐÅ÷:**அ.அ...தா** (Àð¼ §ÁüÀÊôÀ¡Ç÷ **சிறபபு** ÁÕòÐÅ Ð¨È) «Å÷¸¨Ç ±ó¾ §¿Ãò¾Öõ ¦¾¡¼÷Ò ¦¸¡ûÇÄ¡õ ¨¸ô§À º¢ ± ñ : 8940220224

§ÁÖõ þó¾ ¬Ã¡öî º ìÌ ¾ì¸ «ÛÁ¾î º¡ý Ú (IEC) ¦ÀÈôÀð Îû ÇÐ.

§ÁÖõ ¯½× Ó¨ÈÂ↕ø ÁÕòÐÅÃ¡ø ÜÈôÀÎõ Àò¾↕Âõ ¸¡ì ÌÁ¡Ú «È↕×Úò¾ÀÎ¸↕ÈÐ.

þÐ ºõÀó¾Á¡É ¾í¸ÇÐ «¨ÉòÐ Å↕ÅÃí¸Ùõ Ã¸º↕ÂÁ¡¸ ¨Åì¸ôÀÎõ ±É ¯Ú¾↕ «Ç↕ì¸↕§È ý.

þ¾↕ø ÀÂ½ôÀÊ Ó¾Ä↕Â ±ó¾ ¯¾Å↕ò ¦¾¡¨¸Ôõ ÅÆí¸ô À¼Á¡ð¼¡Ð.

þó¾ ¬Ã¡öîº↕Â↕ý §À¡Ð ¯¼Öì Ì §ÅÚ À¡¾↕ôÒ ²üÀÎõ Àðºò¾↕ø «È↕»÷ « ñ ½¡ ÁÕòÐÅÁ¨ ÉÂ↕ø, ¾ì¸ º↕¸↕î¨º «Ç↕ì¸ôÀÎõ.

GOVERNMENT SIDDHA MEDICAL COLLEGE

ARIGNAR ANNA GOVERNMENT HOSPITAL OF INDIAN MEDICINE

CHENNAI – 600 106

POST GRADUATE DEPARTMENT OF SIRAPPU MARUTHUVAM

PRINICIPAL INVESTIGATOR: Dr.A.Anitha **REG NO:**

AN OPEN COMPARATIVE CLINICAL EVALUATION ON "THADIPPU PERUNOI" (PSORIASIS) WITH SIDDHA TRIAL DRUGS "SWARNA PUSHPA RASA CHENDHURAM" (INT), "VETTIVER THAILAM (EXT)" AND "PRANAYAMAM".

FORM IX - DIETARY ADVICE FORM

§º÷ì ¸ ÜÊÂ ¯ ½ × ¸ û:

¸ ¡ö ¸ û:

ÓÕ í ¨ ¸ À¢ ï Í,

« Å ¨ ÃÀ¢ ï Í,

À¢Ã ñ ¨¼,

¸ ¡Ãð,

À¢ð å ð.

¸ ¦¨ Ã ¸ û:

¸ Ã¢º ¡ ¨ Ä,

¦ À¡ ý É ¡ í ¸ ñ ½¢,

Á ½ ò¾ ì ¸ ¡ Ç¢,

ÓÕ í ¨ ¸ ¸ ¦¨ Ã,

Àº ¨ Ä ¸ ¦¨ Ã,

º¢Ú ¸ ¦¨ Ã,

¸ È¢§ÅôÀ¢ ¨ Ä,

¦ ¸ ¡ ò¾ÁøÄ¢.

Ò¾¢É ¡.

ÀÆ í ¸ û:

Á ¡ Ð ¨ Ç,

¬ ôÀ¢ û,

Å ¡ ¨ Æ,

§ÀÃ¢ î ¨ º,

« ò¾¢,

¾¢Ã ¡ ð ¨ º,

¦¸¡öÂ¡
¿¡Åø,
ºô§À¡ð¼¡,
¯Ä÷ ¾Ã¡ð ¨º.
¾¡ÉÂí¸û
Ó¨Ç ¸ðÊÂ ÀÂ÷Å¨ ¸¸û,
§º¡Â¡À ý Š, ¦Åó¾Âõ.
« ¨ºÅõ:
¦ÅûÇ¡ð Î ¸È ®Ãø,
±ÖõÒÁ^ ¨ ƒ,
ÁüÈ¨Å:
À¨É ¦ÅøÄõ
À¡ø
¾Å÷ì ¸ §Å ñ ÊÂ¨Å¸û:
§¸¡Æì¸È, ¿ ñ Î, ¸ÕÅ¡ Î,
§Å÷ì¸¼¨Ä,
±û Ù,
ÀôÀ¡Ç,
« ý É¡º,
ÒÇôÒ ¦À¡Õû¸û
±ÖÁî¨º,
¾ì¸¡Ç,
ÒÇôÒ ¾Â÷,
° Ú¸¡ö,
¦À ñ §À¡¸õ,
¦ÅüÈ¨Ä,À¡ì Ì ,
Ò¨¸Â¨Ä ,
ÁÐ « ÕóÐ¾ø .

PASI SCORE FOR OPD PATIENTS TREATED WITH

SWARNA PUSHPA RASA CHENDHURAM (INT), **VETTIVER THYLAM** (EXT) &**PRANAYAMAN**

S. NO	O.P NO	E_H		I_H		D_H		A_H		E_U		I_U		D_U		A_U		E_T		I_T		D_T		A_T		E_L		I_L		D_L		A_L		TOTAL	
		B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A
1	1283	0	2	0	1	0	0	0	0	4	1	4	2	3	4	3	2	0	0	0	0	0	0	0	0	3	0	2	1	3	2	3	1	16.2	4.0
2	1162	3	1	2	2	2	2	3	2	1	1	3	2	2	0	2	2	2	0	0	0	0	0	0	0	3	1	2	1	2	1	3	2	31.8	4.6
3	4228	2	1	4	1	0	1	3	2	3	2	2	1	3	1	2	2	3	1	4	2	3	2	2	1	3	1	1	0	3	0	3	1	19.4	4.1
4	5002	4	2	4	2	4	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.8	1.0
5	5104	3	2	3	2	3	2	4	2	2	1	3	2	4	2	3	2	3	1	4	2	3	1	3	2	2	1	2	1	2	1	2	1	22.8	6.8
6	4137	4	0	3	0	3	0	4	0	1	0	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.8	0
7	1994	0	1	0	2	0	2	0	2	4	2	3	2	4	2	4	2	0	0	0	0	0	0	0	0	4	2	4	2	4	2	5	2	32.8	8.2
8	8354	0	0	0	0	0	0	0	0	4	0	3	0	3	0	4	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4	0	27.2	0
9	5013	2	0	4	1	1	1	3	2	4	0	3	1	2	2	3	2	2	0	4	1	3	2	2	2	3	0	2	0	4	0	5	2	30.9	3.4
10	2912	2	1	3	1	4	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.7	0.6
11	9115	3	0	3	0	2	0	2	0	2	1	3	2	3	1	3	2	4	0	3	0	3	0	4	0	4	1	4	2	4	1	5	2	42.4	4.8
12	4995	2	0	3	1	3	1	2	2	2	0	1	1	3	2	2	2	2	0	4	1	1	2	2	1	3	0	4	2	2	2	4	2	22.6	5.7
13	3365	3	1	4	1	2	1	4	2	1	1	3	1	2	2	1	1	3	1	4	0	2	0	3	2	3	0	3	0	3	0	4	1	27.3	2
14	3435	4	3	4	0	4	3	5	1	0	0	0	1	0	2	0	1	3	0	3	2	3	0	3	2	0	2	0	1	0	0	0	1	12	8.3
15	7638	0	0	0	0	0	0	0	0	3	0	3	0	2	0	3	0	0	0	0	0	0	0	0	0	2	0	3	0	2	0	3	0	14.4	0
16	4986	3	1	2	1	4	2	3	2	2	1	2	1	3	2	2	2	3	1	2	1	2	1	3	2	2	1	3	2	2	1	3	2	20.2	7.4
17	5087	4	0	4	1	4	2	5	2	4	0	4	1	4	2	5	2	4	1	4	2	4	0	5	2	3	0	2	1	2	1	2	1	41.6	4.4
18	1670	4	0	4	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.8	0
19	3133	0	0	0	0	0	0	0	0	3	1	2	1	3	1	2	1	0	0	0	0	0	0	0	0	4	2	3	1	2	0	3	1	14	1.8
20	7137	2	0	2	0	2	0	2	0	3	0	2	0	2	0	3	0	3	0	2	0	2	0	3	0	3	0	2	0	3	0	3	0	21.3	0

PASI SCORE FOR OPD PATIENTS TREATED WITH

SWARNA PUSHPA RASA CHENDHURAM (INT), **VETTIVER THYLAM** (EXT)

S. NO	OP. NO	E_H		I_H		D_H		A_H		E_U		I_U		D_U		A_U		E_T		I_T		D_T		A_T		E_L		I_L		D_L		A_L		TOTAL	
		B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A
1	9658	0	0	0	0	0	0	0	0	3	0	4	0	3	0	2	0	1	0	3	0	4	0	2	0	3	0	2	0	2	0	2	0	14.4	0
2	7894	0	0	0	0	0	0	0	0	4	1	4	2	3	2	4	2	0	0	0	0	0	0	0	0	3	1	2	2	3	1	4	2	21.6	5.2
3	5612	4	0	4	2	4	1	5	2	4	0	4	1	4	2	5	2	4	0	4	3	4	2	5	2	4	0	4	3	4	2	5	3	60	10.8
4	3012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	4	0	2	0	4	0	3	0	2	0	1	0	2	0	15.6	0
5	9632	4	2	4	1	3	1	5	3	0	0	0	0	0	0	0	0	3	1	3	2	3	4	3	2	0	0	0	0	0	0	0	0	13.6	5.4
6	5284	0	0	0	0	0	0	0	0	4	0	3	0	4	0	3	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	3	0	21	0
7	1478	0	0	0	0	0	0	0	0	3	1	2	0	3	1	4	2	2	0	4	0	3	0	2	2	0	0	0	0	0	0	0	0	11.8	0.8
8	4563	4	0	1	0	3	0	1	0	3	0	3	2	2	2	3	2	1	0	3	0	1	0	2	0	4	2	2	1	2	1	1	1	11.8	3.2
9	2354	4	1	4	2	4	2	5	3	4	1	4	1	4	1	5	2	4	1	4	1	4	1	5	2	4	1	4	1	4	1	5	2	60	6.4
10	6589	3	0	4	2	3	2	3	2	4	2	4	1	4	2	5	2	4	1	4	2	4	1	5	3	4	0	4	3	4	1	5	1	57	7.0
11	1452	2	0	2	0	3	0	4	2	2	0	1	0	3	0	3	1	2	0	3	1	2	0	3	2	2	0	2	0	3	0	3	2	21.1	0.6
12	6325	2	1	3	1	2	2	3	2	2	0	2	0	4	0	2	0	2	2	3	1	4	2	3	2	1	0	1	1	2	1	4	1	23.5	4.6
13	7896	0	0	0	0	0	0	0	0	3	0	4	0	2	0	3	0	4	0	3	0	2	0	2	0	0	0	0	0	0	0	0	0	10.8	0
14	7852	0	1	0	2	0	0	0	1	4	0	3	0	4	0	4	0	0	2	0	1	0	0	0	2	3	2	4	1	2	3	4	2	23.2	4.8
15	2365	2	0	2	0	2	0	2	0	3	0	2	0	4	0	3	0	3	0	1	0	2	0	2	0	4	0	3	0	2	0	4	0	24.6	0
16	2031	0	2	0	3	0	2	0	2	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	0	2	0	3	0	3	0	2	0	8.8	2.8
17	9630	3	0	2	0	1	0	3	0	2	0	2	0	2	0	3	0	3	0	2	0	2	0	3	0	3	0	2	0	3	0	3	0	21.3	0
18	7456	2	0	3	0	0	0	0	1	0	2	4	2	3	2	2	2	0	0	0	0	0	0	0	0	3	0	2	0	4	0	2	0	14.4	6.4
19	2368	2	1	3	1	3	1	2	1	3	0	3	1	2	1	2	1	4	0	3	1	3	0	2	1	2	0	2	1	3	2	2	1	16.4	2.2
20	3148	0	0	0	0	0	0	0	0	4	1	3	1	3	2	3	1	0	0	0	0	0	0	0	0	3	1	3	3	2	1	4	2	18.8	4.8

PASI SCORE FOR OPD PATIENTS TREATED WITH

VETTIVER THYLAM (EXT) &**PRANAYAMAM**

S. NO	OP. NO	E_H		I_H		D_H		A_H		E_U		I_U		D_U		A_U		E_T		I_T		D_T		A_T		E_L		I_L		D_L		A_L		TOTAL	
		B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A
1	5086	2	0	3	0	1	0	1	0	3	2	4	2	3	2	2	2	0	0	0	0	0	0	0	0	3	2	2	2	4	3	2	2	14.4	8
2	5268	2	1	3	1	3	1	2	1	3	0	3	1	2	1	2	1	4	0	3	1	3	0	2	1	2	0	2	1	3	2	2	1	16.4	2.2
3	9920	0	0	0	0	0	0	0	0	4	1	3	1	3	2	3	1	0	0	0	0	0	0	0	0	3	1	3	3	2	1	4	2	18.8	4.8
4	4570	0	2	0	1	0	0	0	0	4	1	4	2	3	4	3	2	0	0	0	0	0	0	0	0	3	0	2	1	3	2	3	1	16.2	4.0
5	5460	3	1	2	2	2	2	3	2	1	1	3	2	2	0	2	2	2	0	0	0	0	0	0	0	3	1	2	1	2	1	3	2	31.8	4.6
6	5171	2	1	4	1	0	1	3	2	3	2	2	1	3	1	2	2	3	1	4	2	3	2	2	1	3	1	1	0	3	0	3	1	19.4	4.1
7	7369	4	2	4	2	4	1	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.8	1.0
8	3107	3	2	3	2	3	2	4	2	2	1	3	2	4	2	3	2	3	1	4	2	3	1	3	2	2	1	2	1	2	1	2	1	22.8	6.8
9	3109	4	0	4	2	4	1	5	2	4	0	4	1	4	2	5	2	4	0	4	3	4	2	5	2	4	0	4	3	4	2	5	3	60	10.8
10	2798	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	4	0	2	0	4	0	3	0	2	0	1	0	2	0	15.6	0
11	1392	4	1	4	1	3	2	5	1	0	0	0	0	0	0	0	0	3	1	3	1	3	1	3	2	0	0	0	0	0	0	0	0	13.6	6.4
12	2102	3	0	4	2	3	2	3	2	4	2	4	1	4	2	5	2	4	1	4	2	4	1	5	3	4	0	4	3	4	1	5	1	57	7.0
13	769	2	0	2	0	3	0	4	2	2	0	1	0	3	0	3	1	2	0	3	1	2	0	3	2	2	0	2	0	3	0	3	2	21.1	0.6
14	2580	2	1	3	1	2	2	3	2	2	0	2	0	4	0	2	0	2	2	3	1	4	2	3	2	1	0	1	1	2	1	4	1	23.5	4.6
15	6566	0	0	0	0	0	0	0	0	3	0	4	0	2	0	3	0	4	0	3	0	2	0	2	0	0	0	0	0	0	0	0	0	10.8	0
16	5931	0	0	0	0	0	0	0	0	4	0	3	0	4	0	4	0	0	0	0	0	0	0	0	0	3	2	4	1	2	3	4	2	23.2	4.8
17	3124	3	0	2	0	1	0	3	0	2	0	2	0	2	0	3	0	3	0	2	0	2	0	3	0	3	0	2	0	3	0	3	0	21.3	0
18	5469	3	0	3	0	2	0	2	0	2	1	3	2	3	1	3	2	4	0	3	0	3	0	4	0	4	1	4	2	4	1	5	2	42.4	4.8
19	5224	2	0	3	1	3	1	2	2	2	0	1	1	3	2	2	2	2	0	4	1	1	2	2	1	3	0	4	2	2	2	4	2	22.6	5.7
20	3001	0	0	0	0	0	0	0	0	4	1	3	1	3	2	3	1	0	0	0	0	0	0	0	0	3	1	3	3	2	1	4	2	18.8	4.8

POST GRADUATE DEPARTMENT OF GUNAPADAM (PHARMACOLOGY)

GOVERNMENT SIDDHA MEDICAL COLLEGE, CHENNAI-106

IDENTIFICATION AND AUTHENTICATION CERTIFICATE

Name of the Student : A. ANITHA

Department : PG - SIRAPPU MARUTHUVAM

Batch year : 2014 - 2017

Name of the sample : Gandhagam (Sulphur), Velvangam (Stannum), Navacharam (Ammoni chloridum), Rasam (Hydrargyrum)

Sample description : **Dried whole plant / metal /mineral**

Date of the receipt : 3.6.2016

REPORT

This sample has been critically studied with macroscopic and organoleptic characters along with relevant literature, I declared that this plant/metal/mineral material is correctly identified as Gandhagam, Velvangam, Navacharam, Rasam and I hereby authenticate that the sample given by Dr. A. ANITHA.

This certificate issued at his/her request and is given only for dissertation purpose.

3/6/16

Signature with Seal

Date: 3.6.2016

Place: chennai

Dr. V. VELPANDIAN, M.D(s), Ph.D,
H.O.D - Department of Gunapadam,
Govt. Siddha Medical College,
Chennai - 600 106.

Government Siddha Medical College
Department of Medicinal Botany

Dr.S.Sankaranarayanan M.Sc., M.Phil., Ph.D.,
Asst. Professor
Head of the Department

6, Anna Arch Rd,
NSK Nagar,
Arumbakkam, Chennai,
Tamil Nadu 600106.

AUTHENTICATION CERTIFICATE

Based upon the organoleptic/macroscopic/microscopic examination of fresh/market sample, it is certified that the specimen given to Dr. A. Anitha B.S.M.S., doing M.D. (S) at Government Siddha Medical College, Arumbakkam, Chennai-106 is identified below as

Binomial name	Family
Benincasa hispida	Cucurbitaceae

References: Flora of Presidency, Gamble, J. S

GSMC/MB-Voucher Specimen No.26/2017

Date: 15.06.2016

Dr. S. Sankaranarayanan M.Sc., M.Phil., Ph.D.,
Head
Dept. of Maruthuva Thavaraiyal
(Medicinal Botany and Pharmacognosy)
Govt. Siddha Medical College,
Arumbakkam, Chennai - 600 106.

POONGA BIOTECH RESEARCH CENTRE

No.10/58, Kamala Nehru Nagar, 1st Street, Choolaimedu, Chennai - 600 094.
Ph : 044 - 23634289, Website : www.poongabiotech.com

Dr. B. Janarthanam
Chief Scientist,

12.07.2016

To whomsoever it may concern

This is to certify that Dr. A. Anitha, PG Scholar, Department of Sirappu Maruthuvam, Goverment Siddha Medical College, Arumbakkam, Chennai – 600 106 has carried out the following work in our centre.

1. Qualitative analysis of Heavy metal in Swarna Pushparasa Chendhuram

B. Janarthanam

Dr. B. Janarthanam

C.L.BAID METHA COLLEGE OF PHARMACY

(An ISO 9001-2000 certified institute)

Jyothi Nagar, Old Mahabalipuram Road

Thoraipakkam, Chennai – 600 097

CERTIFICATE

This is to certify that the project entitled, **Toxicological and Pharmacological study on SWARNA PUSHPA RASA CHENDHURAM** in rats submitted in partial fulfilment for the degree of **M.D. (siddha)** was carried out at C.L. Baid Metha college of Pharmacy, Chennai-97, in the Department of Pharmacology during the academic year of 2015-2016. It has been approved by the **IAEC No: IAEC/XLVIII/28/CLBMCP/2016**

C.L. Baid Metha College of Pharmacy CHENNAI-97 Thoraipakkam

P. Muralidharan

(Dr.P.Muralidharan)

IAEC Member Secretary

சித்த மருத்துவ மைய ஆராய்ச்சி நிலையம், சென்னை - 600 106
सिद्ध केंद्रीय अनुसन्धान संस्थान,
अण्णा सरकारी अस्पताल परिसर, अरुम्बाक्कम, चेन्नई – 600 106
SIDDHA CENTRAL RESEARCH INSTITUTE
(Central Council for Research in Siddha, Ministry of AYUSH, Govt. of India)
Anna Govt. Hospital Campus, Arumbakkam, Chennai – 600106
Phone: 044-2621 4925, Fax: 044-2621 4809

01.3.17

CERTIFICATE

Name of the student: Dr. A. Anitha, III year PG Student, Department of Sirappu Maruthuvam Government Siddha Medical College, Arumbakkam, Chennai-600 106.

Name of the sample: Suvarnapushpa Rasa Chenduram

Name of the Experiment		Mean
Loss on drying(at 105°C)	:	7.32
Total ash	:	88.29
Water soluble ash	:	30.73
Acid insoluble ash	:	50.75
pH value (10%)	:	3.91
Particle size	:	Passes through 200 mesh

(R. Shakila)
Research Officer (Chemistry) & Head,
Department of Chemistry

7/3/17

(Dr. P. Sathiyarajeswaran)
Assistant Director (Siddha) I/c

डॉ. पी. सतियराजेश्वरन/Dr. P. Sathiyarajeswaran
सहायक निदेशक (सि-II)/Assistant Director (S-II) I/C
सिद्ध केंद्रीय अनुसंधान संस्थान,
(केन्द्रीय सिद्ध अनुसंधान परिषद, आयुष मंत्रालय, भारत सरकार)
अण्णा सरकारी अस्पताल परिसर, अरु... चेन्नई-600 106
SIDDHA CENTRAL RESEARCH INSTITUTE
(Central Council for Research in Siddha, Ministry of AYUSH, Govt. of India)
Anna Govt. Hospital Campus, Arumbakkam, Chennai 600106

INSTITUTIONAL ETHICS COMMITTEE

Date:

Sub: IEC review of research proposals.

Ref: Your letter dated

MEMBERS	PARTICIPATION	SIGNATURE
DR.P.JEYAPRAKASH NARAYANAN M.D(S)., Chairman	✓	
DR.V.BANUMATHI M.D(S)., Member Secretary		26/03/15
DR.N.KABILAN M.D(S)., Clinician- Siddha	✓	26/3/15
DR.P.SATHIYA RAJESWARAN M.D(S)., Clinician- Siddha	✓	26/3/15
DR.G.AADINAAATH REDDY,M.Pharm, Ph.D., Pharmacologist	✓	Aadinaath 26/03/15
DR.S.THILAGAVATHY Msc.,Ph.D., Social Scientist	✓	26/3/15
DR.T.MAHALAKSHMI M.A.,Ph.D., Linguistic Expert	✓	T.Mahal 26.03.15
DR.P.VIDYA M.B.B.S., DMRD., Modern Medicine Expert	✓	26/3/15
MR.P.SARAVANAN., Public Person	✓	

26/3/15.

Dr.P.Jeyaprakashnarayanan
Chairman

26/3/15

Dr.V.Banumathi
Member Secretary

GOVERNMENT SIDDHA MEDICAL COLLEGE

Arumbakkam, Chennai-106

Communication Of The Decision Of Institutional Ethics Committee (IEC)

IEC No: GSMC-CH-ME-4/2015/012

Protocol title:

AN OPEN COMPARATIVE CLINICAL EVALUATION ON "THADIPPU PERUNOI" (PSORIASIS) WITH SIDDHA TRIAL DRUGS "SWARNA PUSHPA RASA CHENDHURAM" (INT), "VETTIVER THAILAM (EXT)" AND "PRANAYAMAM".

Principal Investigator: Dr. A.ANITHA

Name & Address of Institution:

Government Siddha Medical College,

Arumbakkam, Chennai-106

☑ New Review	☐ Revised Review	☐ Expedited Review

Date of review (DD/MM/YY): 26/03/2015

Date Of Previous Review, If Revised Application:

Decision of the IEC

☑ Recommended	☐ Recommended with suggestions
☐ Revision	☐ Rejected

Suggestions / Reasons / Remarks:

Heavy .metals analysis should be done.If metals level are raised from normal ppm level ,chronic toxicity study should be done. Change sample size as : 20 patients-Internal &External drugs, 20 patients- External drug & pranayamam, 20 patients-Internal ,External drugs and pranayamam. In consent form ,add to get photo consent with face masking and personal identification markings.

Recommended for a period of 1 year
from date of completion of preclinical studies :

Please Note:

- Inform IEC immediately in case of any adverse events/serious drug reaction.
- Seek IECapproval in case of any change in the study procedure, site and investigator
- This approval is valid only for period mentioned above
- IEC member have the right to review the trial with prior intimation.

26/3/15.

Dr.P.Jeyaprakashnarayanan
Chairman

26/03/15

Dr.V.Banumathi
Member Secretary

The Tamil Nadu Dr.M.G.R. Medical University

#69, Anna salai, Guindy, Chennai-600 032.

This certificate is awarded to

Dr./Mr./Ms. A. ANITHA

for participating as ~~Resource Person~~ / Delegate in the First Workshop on

"Pre-clinical Studies in Research"

for Faculties & PG students of ASU Systems

Organised by the Department of Siddha,

The Tamil Nadu Dr. M.G.R. Medical University on 16.12.2014

Dr. N. KABILAN M.D. (Siddha)
Reader, Dept. of Siddha

Dr. JHANSI CHARLES, M.D.
Registrar

Prof. Dr. D. SHANTHARAM, M.D., D.Diab.,
Vice-Chancellor

Tha Tamil Nadu Dr.M.G.R.Medical University

69,Anna Salai,Guindy,Chennai - 600 032.

This Certificate is awarded to Dr/Mr/Mrs.....A. Anitha.....

for participating as ~~Resource Person~~ / Delegate in the Seventeenth (XVII) Workshop on

" RESEARCH METHODOLOGY & BIOSTATISTICS "

FOR AYUSH POST GRADUATES & RESEARCHERS

Organized by the Department of Siddha

The Tamil Nadu Dr. M.G.R. Medical University from 15th to 19th June 2015.

Dr.N.KABILAN, M.D.(Siddha)
READER,DEPT.OF SIDDHA

Prof. **Dr.P.ARUMUGAM,** M.D.,
REGISTRAR i/c

Prof. **Dr.D.SHANTHARAM,** M.D., D.Diab.,
VICE - CHANCELLOR